2016 하계 ETS Summer School 모집 공고

국제처에서는 2016년도 여름방학 동안 진행되는 **캐나다** Ecole de Technologie Superieure Summer School 프로그램 참가 학생을 모집합니다. 캐나다 현지에서 글로벌 문화와 아시 아문화를 직접 체험할 수 있는 프로그램으로, 어학실력 향상과 한양대 학생들이 글로벌 인 재로 성장해나갈 수 있는 발판이 될 수 있도록 프로그램을 진행하오니 여름방학 캐나다 ETS Summer School 프로그램에 학생 여러분의 많은 참여와 지원 바랍니다.

1. 프로그램 구성

연수기관	Ecole de Technologie Superieure		
파견도시	케나다		
파견기간	5/24-25: 한국에서 24Hours of Innovation competition 프로젝트 참여 6/30~7/29: 캐나다 몬트리올에서 Summer School		
프로그램 구성	○ 전세계 공학대학 학생들을 위한 specifically designed program: "Summer School on Innovation and Technological Design" ○ 프로그램 내용 1. 5/24~25: 24Hours of Innovation competition 참여 – 특정 산업의 도전과제를 받고, 정해진 24시간동안 과제 수행 2. 6/30~7/29: 캐나다 몬트리올에서 4주 간 48H 수업 & 64H practical work - Creativity, innovation, basic design and prototyping, Human-centered design and advanced concepts of innovation, Project realization - 스포츠 활동과 현지 학생들과의 색다른 교류 ○ 수업 방식: Different teaching strategies will be used throughout the course: - Lectures, conferences, demonstrations, learning activities, role playing, etc.; - Guided exercises, debates and discussions; - Case studies and simulations; - Practical applications (including prototyping) and problem solving; - Active and constructive participation ○ 숙소: 추후 업데이트 예정		
선발인원	4 명		
지원시기	4월 13일(수) 14:00 까지 온라인 지원		
학점인정	단기 어학연수 3 학점 (계절학기 일반교양) 혹은 자비유학 2 학점(전공, 교양) 추후 변경 가능		
교비 장학금	<mark>프로그램비(ETS 수업료) 면제</mark> (전 과정 수료 후 계좌이체 지급)		

^{*}항공권 사정에 따라 일정은 변동될 수 있습니다.

^{*}학점 인정 귀국보고서 미제출 또는 출석률 100% 미만 시 **학점인정 불가 및 지원금 환수**

2. 예상 비용

	항목	금액 (단위: 원)
1	수업료(ETS 수업료 면제)	0
2	필수 ETS 학교 보험	98,259
3	항공료(시기 및 노선에 따라 변동)	1,500,000
4	숙소비(변동 가능)	약 850,000
	학생부담금 총액	2,448,259

* 상기 금액은 변동 가능한 예상금액이며 환율 및 현지사정으로 달라질 수 있습니다.

(적용환율 : 1,129.42원/US\$1, 2015.03.31. 외환은행 송금 보낼 때 기준)

* 불포함 내역 : 용돈, 식비, 교통비, 비자 등 불포함

3. 지원안내사항

	1. 안내사항
1	2016 학년도 하계 타 해외연수 프로그램과 중복지원 불가
	파견기간 중 수강신청(계절학기/온라인 강좌 등) 금지
2	교비 지원금은 연수 종료 후 개인 계좌로 입금 (약 8월 중)
3	단체항공 진행하며, 반드시 단체 출국 (개별 출국 불가, 귀국일정 변경 가능)
4	기존에 어학연수학점을 인정받은 학생은 어학연수학점 중복인정 불가 (재학 중 1회만 가능)
5	여권이 없는 경우에는 반드시 4월말까지 발급 신청을 해주시기 바랍니다.
6	프로그램에서 탈락한 경우에는 차기 선택권을 드립니다.
7	프로그램에 대한 자세한 상담은 면접 진행 시 가능하오니 편한 마음으로 와주시기 바랍니다.
8	국제처 홈페이지(www.dic.hanyang.ac.kr) > 해외교육체험기에서 후기 확인 가능
	<학점안내사항>
	1) 추후 공지

	2. 모집 일정			
#	일 정	날 짜	내 용	
1	온라인지 원	<mark>~4.13(수)</mark> 오후 2시	1. 한양대학교 온라인 지원 1) 프로그램 확인 HY-in 포털 > 신청 > 학점교류관리 > 단기파견프로그램내역 > 프로그램상세정보 2) 온라인 지원 HY-in 포털 > 신청 > 학점교류관리 > 단기파견프로그램내역 > 프로그램신청. ※ 한양대학교와의 면접에서 합격한 학생들은 최종적으로 ETS에 지원을 할 때, Curriculum Vitae(CV)와 Letter of motivation in English stating your objectives for joining the Summer School을 제출해야하기 때문에, 미리부터 준비하시기 바랍니다.	
2	서류발표	4. 13(수)20:00	서류전형 합격자 발표 및 면접 일정 공지 — 개별 이메일 공지	
3	면접	4. 14(목) 오전	1) 면접 시 복장자유 2) 결강사유서 발급	

			3) 인성+외국어면접 (약 5-10분)
			4) 면접 시 하단서류 면접관에게 <mark>직접제출</mark>
			① HY-in 신청 지원서 출력본
			② 자기소개서
			③ 보증인/여권사본/서약서
			④ 외국어 성적 증명서 사본
			※ ②③ HY-in '프로그램 상세정보' 페이지에서 다운로드
4	최종합격	4. 14(목)	치즈 하거지 바ㅠ FTC 지의 니자 ○기에데이션 이저 미 자시 고지
4	발표	20:00	최종 합격자 발표. ETS 지원 시작. 오리엔테이션 일정 및 장소 공지
_	오리엔테	4 의 조	
5	이션	4월 중	

* 상기 일정은 변동 가능하며, 모든 공지사항은 개별 이메일로 통보

	3. 의무사항			
1	출석률 : 90%이상			
	※ 공지된 기간 엄수 (출석미달 시 지원금 지급 불가)			
2	연수 종료 시 국제처 홈페이지에 후기 보고서 업로드 및 온라인 설문조사 응시			
3	파견 전 반드시 해외 보험에 가입할 것			

	4. 지원자격				
	<학점인정 지원자격>				
	* 학부 누적평점 3.0 이상인 한양대학교 학부생 4학년 및 대학원생				
1	Applicants must be enrolled either in a graduate program (Master's or PhD) or be one year away from graduation in an engineering undergraduate program ※ 학점인정: 1학기 이수자 이상 가능				
	※ 본 자격에 해당하지 않는 학생은 지원 시 우선순위에서 제외될 수 있습니다.				
	(만약 파견이 가능하다 해도 학점인정은 불가함)				
	현재 8 학기에 재학 중인 학생은 학업 연장 시에만 학점인정 및 지원금 지급				
2	대학원생 학점 인정 불가				
	(2016년 8월 졸업예정자는 지원금만 지급 가능)				
3	학부 누적평점 3.0 이상				

5. 담당자/문의		
국제처	서울캠퍼스	박민주 선생님/ minjoopmj@hanyang.ac.kr / 02-2220-2457
<u> </u>	ERICA 캠퍼스	오수지 선생님/ <u>suzzzi@hanyang.ac.kr</u> / 031-400-4915
* 이메일로 문의하시면 더 정확하게 답변을 받으실 수 있습니다.		

3. 캐나다 소개



① 위치: 북아메리카

② 수도: 오타와

③ 언어: 프랑스어, 영어

④ 면적: 9,984,670km² (세계 2위)

⑤ 인구: 약 34,834,841명 (세계 37위)

⑥ GDP: 1조 6,155억\$, 세게 10위

⑦ 정치: 입헌군주제 (영연방국가)

⑧ 통화: 캐나다 달러(CAD)

⑨ 기후: (몬트리올 7월) 평균강수량 96.8mm, 평균 강수일수

평균 최저기온은 영상 13.6℃, 평균 최고기온이 영상 25.5℃이며 월평균 일교차는 11.9℃로 서울의 9월 날씨와 비슷하지만 일교차는 더 큼

⑨ 시차: 한국보다 13시간이 늦음(-13)

⑩ 종교: 로마가톨릭교, 개신교, 기타 기독교 등

• 북아메리카 대륙 북부에 잇는 국가로 영국연방에 속함

- 1763년 영국이 프랑스와 맺은 파리조약 이후 영국의 식민 상태로 있다가 1867년 캐나다 자치령으로 독립, 1951년 정식국명을 캐나다로 변경
- '다문화주의'를 표방하며 1971년 각 인종들의 다양성을 인정하는 다문화주의 정책을 세계에서 처음으로 채택
- 캐나다인으로 유명한 음악가는 브라이언 애덤스, 셀린 디온, 사라 맥라클란, 레너드 코헨 등이 있으며 몬트리올 재즈페스티벌은 재즈팬들에게 유명한 음악축제임
- 1963년 1월 14일 한국과 외교관계를 맺었으며 1965년과 1974년에 캐나다 대한민국 대사관, 주한 캐나다 대사관이 각각 설치되었다.

4. ETS 소개



- 1974 년 설립된 캐나다 주립 대학 가입 학교
- 8,000명의 학부생들과 2,000명의 학생들이 석사, 박사과정에서 공부하고 있으며 세계 경쟁력을 갖춘 25개의 관련 동아리들의 활동이 활발함
- 응용 공학 교육과 회사와의 기술이전에 특화되어있으며, 실용과 혁신에 중점을 둠
- 가장 역점을 두는 학과로는 Aerospace and ground transportation, Energy, Environment and construction, Health technology Information and communication technology가 있음
- 홈페이지: http://en.etsmtl.ca/en/home?lang=en-ca
- 주소: 1100 Rue Notre-Dame O, Montréal, QC H3C 1K3, Canaka

5. 프로그램 내용

1) Program schedule

The Summer School kicks off with the "24 Hours of Innovation" event held on May 24-25, 2016, on university campuses on all continents. The participants will experience the creativity and innovation process applied to real challenges submitted by industry, for 24 consecutive hours. The competition can be played at the students' home campus, and is not limited to Summer School participants.

May 24-25, 2016 (at home campus or at ÉTS in Montreal)	24 Hours of Innovation The competition runs around the clock from 9 a.m. to 9 a.m. EST
June 30 - July 29, 2016 (in Montreal)	The Summer School goes on in Montreal (4 weeks)

Weekends will include time for project work and social activities to discover Montreal and nearby areas.

2) Program content

The Summer School is based on competency management and focuses on concrete projects. The Summer School on Innovation and Technological Design is an intensive four-week course divided into lectures and practical work.

Module	ТНЕМЕ	CONTENT
MODULE#1 Prior to the course (May 24-25, 2016)	ÉTS worldwide competition	24 Hours of Innovation competition
MODULE#2	Creativity, innovation, basic design and prototyping	Conditions for creativity, innovation process, product definition, design methods and introduction to prototyping
MODULE#3	Human-centered design and advanced concepts of innovation	Organization design, complexity and design thinking, advanced interaction media, business model, marketing strategies and open innovation
MODULE#4	Project realization	Implementation of the innovation process on real projects

Credit hours

- 24 Hours of Innovation competition
- 48 hours of class time
- 64 hours of practical work

 Total 136 hours = 3 credits (equivalent to 6 ECTS credits)

> Teaching strategies

Different teaching strategies will be used throughout the course:

- Lectures, conferences, demonstrations, learning activities, role playing, etc.;
- Guided exercises, debates and discussions;

- Case studies and simulations:
- Practical applications (including prototyping) and problem solving;
- Active and constructive participation.

3) 24 Hours of Innovation competition



The Summer School kicks off with the <u>24 Hours of Innovation</u> competition... an all-night-event!

The 24 Hours of Innovation competition is an international event held on university campuses throughout the world where students can participate from their home base. Participants team together to find creative solutions to challenges proposed by various organisations (industries, public institutions, non-profit organisations, etc.).

The 24 Hours of Innovation competition is compulsory for all ÉTS Summer School participants and is fully integrated into the Summer School program, as it constitutes its first module.

The subsequent modules are conducted in continuity to the projects initiated during the 24 Hours of Innovation competition.

Enrolment in the Summer School is made on an individual basis. It is not required to enrol other team members if they wish to limit their participation to the 24 Hours of Innovation competition.

For more information, read the webinar presentations of the first edition held <u>prior to the 2015 competition</u> (may 23th, 2015), and <u>after the competition</u> (June 10th, 2015).

4) 수업 syllabus



Innovation and Technological Design (3 credits)

1. SCHEDULE

Period	From Monday to Friday, 9h00 – 17h00	
	From July 6 to July 31, 2015	

2. FACULTY TEAM

School Director, Louis Cote	louis.cote@etsmtl.ca	Director, Office of Research
		Development & Partnerships
Prof. Vincent Duchaine	vincent.duchaine@etsmtl.ca	Dept. Automated
		manufacturing engineering
Prof. Mohamed Cheriet	mohamed.cheriet@etsmtl.ca	Dept. Automated
		manufacturing engineering
Prof. Robert Hausler	robert.hausler@etsmtl.ca	Dept. Construction and
		environment engineering
Prof. Mathias Glaus	mathias.glaus@etsmtl.ca	Dept. Construction and
		environment engineering
Lecturer Mario Dubois	mario.dubois@etsmtl.ca	Expert in creativity & innovation

3. COURSE OBJECTIVES

Mastering creativity and innovation methods can have a significant impact on a company's competitiveness, performance and sustainability. These methods have become increasingly important since companies allow less and less time for ideation and innovation.

This new course essentially aims at familiarizing students with the various issues, facets and best practices regarding innovation and technological design. From the creative process, where the best ideas are conceived and developed, to rapid and 3D prototyping, to the innovative process that enables a designed product or service to be marketed, students will apply their new skills on real challenges. They will acquire knowledge through multidisciplinary and intercultural team work. During the process (from idea to innovation), students will also review and apply the technical skills they have acquired in engineering to develop innovative solutions that meet the proposed technological challenges.

Any student who has taken one or several master's-level engineering courses can also benefit from this course, as it will enable existing links between previously acquired notions and methods associated with innovation and technological design to be put into perspective.

4. SPECIFIC OBJECTIVES AND ACQUIRED COMPETENCIES

At the end of the course, the student should be able to:

- Prepare and be part of a multidisciplinary and multicultural team for efficient ideation and innovation sessions;
- Use creativity methods to define a need or a problem, generate innovative ideas, select the best ideas and bring them to fruition for innovation;
- Use and incorporate the Design Thinking approach into the ideation process to best include the client in the innovation process;
- Use different prototyping methods to best define and choose ideas to be retained for the innovation process, and demonstrate the value of innovation;
- Incorporate acquired engineering notions into the technological design of the product or service to be developed with regard to the corporate challenges to be met;
- Use an innovation process to choose the retained idea(s) to be submitted according to the corporate challenge to be met;
- Use marketing methods to sell the retained idea(s);
- Understand the importance of using creativity, Design Thinking and innovation methods to better perform when time is short.

In addition, the student will develop skills related to an engineer's career path and will be able to:

 Efficiently communicate concepts and achievements through the presentation of a completed prototype.

5. TEACHING STRATEGIES

48-hour course

64 hours of practical work

This intensive four-week course will be divided into lectures (12 hours per week) and practical work (16 hours per week). Team projects will also be carried out during and outside of class. Prior to this course, all students will have participated in the "24 Hours of Innovation" competition that took place in May 2015.

The teaching approach for this course will focus on learning creativity, *Design Thinking* and innovation methods associated with previously acquired engineering skills.

Different teaching strategies will be used throughout the course:

- · Lectures, demonstrations, learning activities, role playing, etc.;
- · Reading of associated texts;
- Guided exercises, debates and discussions;
- Speakers and guests;
- · Case studies and simulations;
- · Practical applications (including prototyping) and problem solving;
- Team oral presentations on:
 - A team ideation session in the banking service sector;
 - Four team ideation and innovation sessions to develop a solution for the chosen corporate challenge.
- · Active and constructive participation of each student throughout the session.

- 6. COURSE CONTENT

COURSE	COURSE ACTIVITIES		
Week 1	COURSE ACTIVITIES Building a project team: Introduction Concept related to building a team Competencies, roles within a team, leadership and creative style Building multicultural and multidisciplinary teams and choosing a corporate challenge Creativity methods: Introduction Creativity process		
	Mini creativity tools Rapid prototyping: Introduction Rapid prototyping methods Visit of échoFab MIT Fab Lab Presentation 1: Proposed innovative solution — Banking service sector		

Week 2	Design Thinking approach: Introduction – Human-centered design Complexity, creativity and Design Thinking Advanced interactivity media Organizational design and management Tangible interaction systems
	Presentation 2: Solution to the chosen challenge using the <i>Design Thinking</i> approach
Week 3	Various data research, analysis and business development strategies: Business Model Generation, part 1 Big Data and creativity Introduction to Living Lab sessions Innovative models: Innovative methods vs. communities of practice Innovative methods vs. communities of practice Putting the innovative process into practice Review and integration of engineering notions for the chosen project: Engineering concepts relating to the project Incorporating these concepts into the innovative solution
	Presentations 3 and 4: Innovative solutions to a corporate challenge presented according to the innovative process steps
Week 4	Marketing strategies: • Business Model Generation, part 2 • Marketing strategies • Crowdfunding • Social media • Open innovation concepts
	Rapid 3D metal prototyping: Introduction Demonstration Review and integration of engineering notions for the chosen project: Engineering concepts relating to the project Incorporating these concepts into the innovative solution
	Final presentation of the project and related prototype

- Lab Equipment Used

- Rapid prototyping materials
- Plastic and metal 3D printers
- Laser cutter

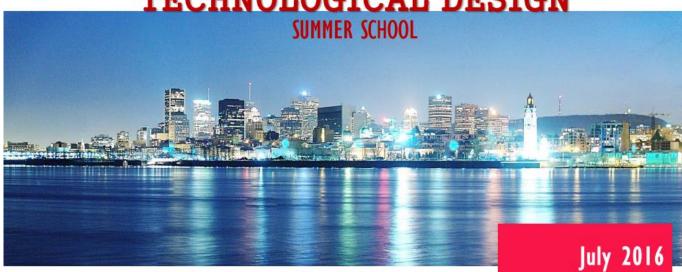
7. EVALUATION

ACTIVITY	DESCRIPTION	DATE	%
Presentation 1	Proposed innovative solution – Banking services sector	July 10, 2015	15
Presentation 2	Presentation 2: Solution to the chosen challenge using the <i>Design Thinking</i> approach	July 17, 2015	15
Presentation 3	Presentation 3: Innovation solution(s) to a corporate challenge presented according to the initial innovative process steps	July 22/23, 2015	15
Presentation 4	Presentation 4: Innovation solution(s) to a corporate challenge presented according to the subsequent innovative process steps	July 24, 2015	15
Final presentation	Final presentation of innovations for chosen challenge	July 31, 2015	30
Final prototype	Associated prototype(s)		10

** 한양대학교에서 면접 합격 후 제출해야 하는 서류(미리미리 준비하세요):

- Post-secondary transcripts: university-level courses and marks, and current registration
- Birth certificate
- Curriculum Vitae
- Letter of support released by an authorized person at home university, stating that the applicant is officially referred and allowed to participate in the Summer School →국제처에서 발급
- Letter of motivation in English stating your objectives for joining the Summer School
- Proof of English proficiency

INNOVATION AND TECHNOLOGICAL DESIGN



designed for engineering students from partner institutions around the world DE TECHNOLOGIE SUPÉRIEUR 00 NOTRE-DAME STREET WEST NTREAL,QC, CANADA H3C IK

July 2016 Downtown Montreal Quebec, Canada

The session kicks off with an around-the-clock event. the 24 Hours of Innovation.

ÉTS is part of the Université du Québec network

WWW.ETSMTL.CA/EN



École de technologie supérieure

1



DESIGN

Welcome to ÉTS Montreal!



ETS is an institution of higher education specialized in engineering, technology and innovation that awards Bachelor, Master and PhD degrees

- Created in 1974: « 40 years of Innovation! »
- Practical approach in every course
- Close links to industry through a cooperative education system
- 75% of research activities are carried out in collaboration with industrial partners



PROGRAM OVERVIEW

Begins with the 24 Hours of Innovation competition at the students' home base May 24-25, 2016



Followed by a 4-week intensive Summer School in Montreal June 30 - July 29, 2016

- 24 hours of innovation competition
- 48 hours of class time
- 60 hours of pratical work

Total 136 hours (including the 24 Hours of Innovation) = 3 credits

Weekends will consist of a mix of organized leisure and free activities to discover Montreal and nearby areas (Ottawa, Quebec city, festivals...)





JUNE 30 - JULY 29, 2016



Kick-off session: an around-the-clock worldwide event

The 24 Hours of Innovation competition



Compulsory for all ÉTS Summer School participants and fully integrated into the Summer School program as part of its first

The subsequent modules (2, 3 and 4), which take place in Montreal, follow up on the projects initiated during the 24 Hours of Innovation competition



June 30- July 29, 2016





4



PROGRAM CONTENT





The Summer School will propose multidisciplinary challenges related to the following engineering disciplines







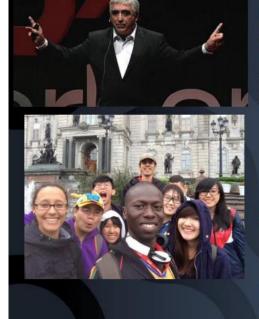


PROGRAM CONTENT









Rodule 1

Worldwide competition

Rodule 1

Creativity, innovation, basic design and prototyping

Module 3

Human-centered design and advanced concepts of innovation

Kodule 4

Project realization

- Organization design, complexity and design thinking
- Advanced interaction media
- Business model
- Marketing strategies
- Open innovation

Module

Worldwide competition

Module .

Creativity, innovation, basic design and prototyping

Module 3

Human-centered design and advanced concepts of innovation

Module 4
Project
realization

Desjardins Challenge

Khaled, Karen, Vicky and Miao nes,

Implemention of the innovation process on real projects







The summer school offers participants an immersion into a multicultural environment.







At £75, our approach to education is very pragmatic. Since the Summer School focuses on concrete projects, by the end of the program students will be familiar with the methods and tools related to innovation and technological design.