

## Summer Course on Technological Innovation

# Grand Design by Japan

### Grand Design Project I : Technological Innovations in Global Perspectives and Education Program

**Call for students and participants. Open to all students and the public**

2018 Daiwa Security Mirai-sendo Chair-ship funded by Keio University,

A Brand New Course by Keio Business School

Cross-disciplines, Project-Program, Professional Education

企画実施責任者

科目担当者

経営管理研究科 姉川知史

- Enrollment for Graduate Students of Keio University for Registration for Credit
  - Science and Technology ⇒ Ask your office for 理工・KBS連携科目 (6月29日締切)
  - KBS and others ⇒ ask your department and KBS Office (register by July 2, 11AM)
- Enrollment for Others Outside Keio University, Ask Professor Anegawa and/or KBS

単位履修は  
要履修申請

**<Objectives>** How to solve important problems the world and Japan face based on science and technology. We provide a brand new summer course "Grand Design I-Technological Innovations in Global Perspectives and Education Program".

**<Advantages>** This is a technology management with cross-section disciplines, cross-generation, and professional education

1. Intensive lectures and proposal writing workshop by a world renowned professor
2. Intensive project and program management lectures and workshop by leading professors
3. Forum with more than ten renowned professors and professionals
4. Main focus is on crisis, sustainability, health and education

#### Part 1 Summer Intensive Course (required for credit)

July 21(Sat), 22(Sun), 28(Sat), 29(sun), August 4(Sat), 5(Sun), 10:45-18:00

**Module 1** 3 Day lectures and workshop of Project and Program Management by Professor Hiroshi Tanaka (SKEMA, Business School in France)

**Module 2** 3 Day lectures and Proposal Writing Workshop for a Start-up by Professor Kenji Uchino (Penn State University, Professor) based on his new text book.

**Part 2 Forum** 5 Half day Fall Semester Follow-up forum (optional) Schedule TBA  
Lectures on Technological Innovation and Education by more than ten professors, business men, and professionals

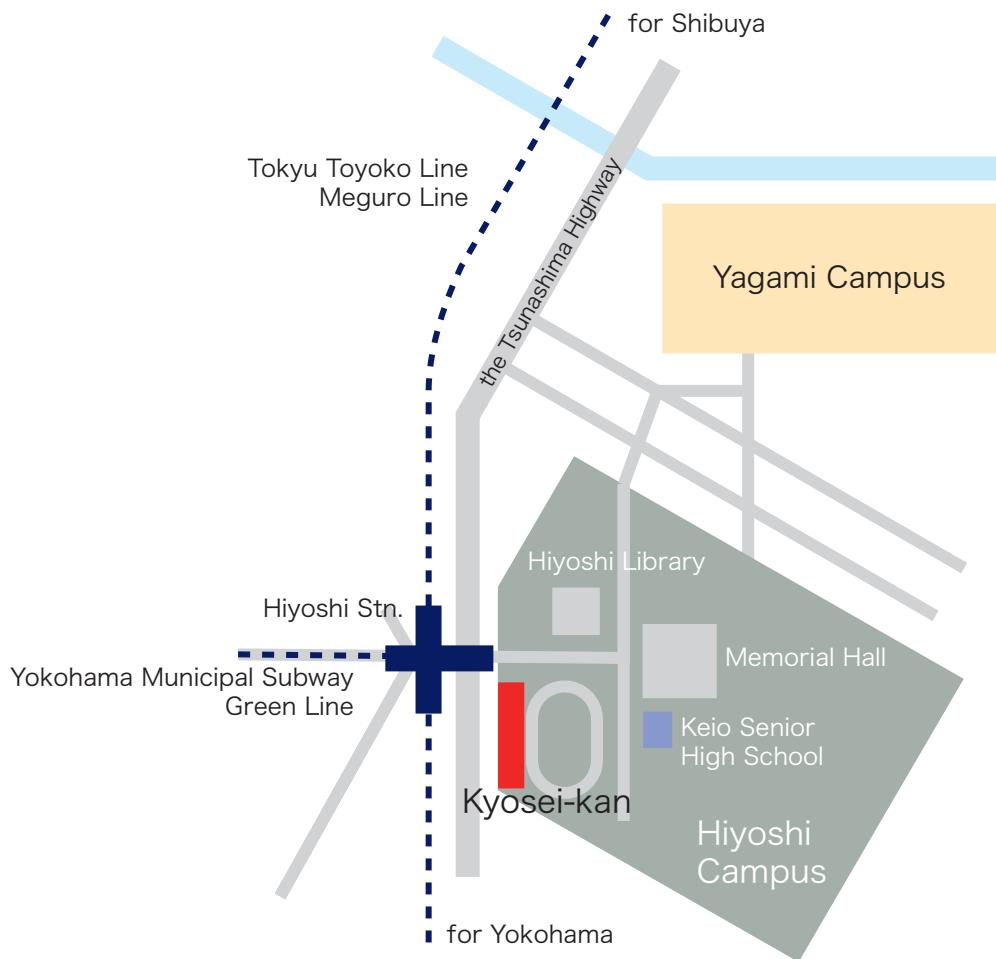
**<Organization and Contact Information>** Keio University, Graduate School of Business Administration, Grand Design by Japan Program, (Professor Tomofumi Anegawa, 045-564-2015, or keio.grand.design@gmail.com)

**<Language>** English and/or Japanese (Most Instructors command both languages)

**<Expected Students and Participants>** Those who are committed to create technology-based solutions for global society

## ■ Access to Kyosei-kan

### ■ Map



### ■ Address

Kyosei-kan  
4-1-1 Hiyoshi, Kohoku-ku, Yokohama-shi, Kanagawa 223-8526  
Phone:+81-45-566-1000

### ■ Access

One minute walk from Hiyoshi station on the Tokyu Toyoko Line, Tokyu Meguro Line, and Yokohama Municipal Subway Green Line.

## 2018 年度大和証券未来先導チアシップ講座

慶應義塾大学院 経営管理研究科科目・理工学研究科連携科目

### 「グランド・デザイン・プロジェクト 1 —Grand Design of Technological Innovations in Global Perspectives and New Education Program」

本科目は国際的観点から技術革新マネジメントを検討し、その教育方法を実践します。英語による、Project and Program Management, Special Lectures, Proposal Writing Workshop, Follow-up Forum, Project を組み合わせた新機軸の授業です。クラス 35 名(MBA 学生 15 名、理工系・医学系他 10 名、教員・社会人 10 名)を募集します。

実施主体 姉川知史 慶應義塾大学大学院経営管理研究科 教授

講師 Professor Hiroshi Tanaka (SKEMA Business School, France)

Professor Kenji Uchino (Pennsylvania State University, US) 他 10 人前後の招聘講師

場所 慶應義塾大学大学院経営管理研究科 4F -5F 教室

日程 2018 年 7-8 月週末 6 日間集中夏期講座と 2 学期 (秋学期) ) 週末半日 5 回前後

#### Part 1 Module1 Project and Program Management

7 月 21 日土曜日 9:30- オリエンテーション, 10:45-18:00

7 月 22 日日曜日 10:45-18:00

7 月 28 日土曜日 10:45-18:00

#### Part1 Module 2 Lectures on Technology Management and a Workshop for Research Proposal

7 月 29 日日曜日 10:45-18:00

8 月 4 日土曜日 10:45-18:00

8 月 5 日日曜日 10:45-18:00

#### Part 2 9-12 月の毎月 1 回の頻度の半日フォーラムならびに学生チームの Project 研究

修了証認定は Part 1 の 3 分の 2 以上の参加と発表・リポートの合格

科目単位認定は、Part 1 の Module1 と Module2 のそれぞれの 3 分の 2 以上の出席とリポート課題の合格、Part2 の参加と合格、履修申請は 2018 年 6 月 29 日

講座 HP <http://www.dff.keio.ac.jp/>

参加料 学生無料、社会人 60,000 円(未来先導基金助成により免除)

## Grand Design of Technological Innovations in Global Perspectives and New Education Program (大和証券チアシップ講座)

### 講義の趣旨

日本の科学・技術の長期的低下リスク、経済成長と持続可能性のリスクを前提として、「大学における科学・技術成果をどのように具体的に商業化、実用化して世界の直面する課題解決を図るか」という観点の技術マネジメントについて、広域学際研究に基づく授業を行う。類似プログラムは内外の教育機関で多数提供されているが、本講座は次の特徴を強調する。

1. 実際に自ら科学・技術を生み出して、その実用化と、その体系化を行っている研究者を招聘した講義・フォーラムによって、その体験を整理することで、課題解決を図る。

2. アメリカ合衆国大学院教育の先端手法による「Workshop on Successful ‘Research Fund Proposal’ Writing based on Crisis Technologies for Small Business Start-up」を行う。

3. 3日間集中 Project and Program Management Seminarにより、そのエッセンスを学習する。また、2学期にフィールドを選択して、Project Management を実践する。

4. アメリカ合衆国、ヨーロッパ、日本の「科学・技術の Ecosystem」を比較して、日本の問題を解決する方法を検討する。

5. 危機管理、持続可能性、医療他の技術領域の具体的な成功、失敗事例を国際的観点から検討する。

6. 課題解決について、科学、技術、情報、社会科学、人文科学の広域学際研究の成果をグローバルに統合する方法を検討する。このために Education Program の在り方を強調し、内外の代表的研究者と実務家を招いたフォーラムを実施する。

### コーディネーター

姉川知史 (大学院経営管理研究科 教授)

### 招聘者ならびに講義担当者

Kenji Uchino, ケンジ・ウチノ

所属 : Director, International Center for Actuators & Transducers, Professor, Electrical Engineering, The Pennsylvania State University, IEEE UFFC Distinguished Lecturer)

田中弘, タナカ・ヒロシ (Professor, SKEMA Business School France)

他、10名を超える各専門の教員

**2018 Daiwa Security Mirai Sendo Chairship Lecture**

**Keio University, Graduate School of Business Administration**

**Grand Design Project I - Grand Design of Technological  
Innovations in Global Perspectives and New Education  
Program-**

**6-day Summer Intensive Course plus Fall Semester  
Real Projects and Forums**

**1. Special Lectures on Technology Management**

**2. Workshop on Successful ‘Research Fund Proposal’  
Writing based on Crisis Technologies for Small  
Business Start-up**

**3. Three-day Project & Program Management  
Seminar**

**4. Real Proposals and Real Projects**

**5. Forums by Renowned Professionals and  
Presentations**

## Course Announcement, Keio University, Business School

### Grand Design Project I “Grand Design of Technological Innovations in Global Perspectives and New Education Program”

As of June 15, 2018

**Subject Title:** Grand Design of Technological Innovations in Global Perspectives and New Education Program

**Principal Instructors:** Kenji Uchino, (MS, MBA, Ph. D. Director, International Center for Actuators & Transducers, Professor, Electrical Engineering, Materials Science & Engineering The Pennsylvania State University)

Distinguished Honors Faculty, Schreyer Honors College (2018 – 2019)

Hiroshi Tanaka (Professor, SKEMA, Business School in France)

Invited instructors (a dozen of instructors chosen based on topics TBA)

**Coordinator and Instructor,** Tomofumi Anegawa, Professor at Keio University

**Time Schedule** Summer intensive course (six days) and Fall Semester Forums

July 21-22, 28-29, August 4-5 (whole one day 10:00 AM-18:00)

Monthly Follow-up Forum (half day forum, 5 forums in fall semester)

**Purpose:** To educate students to master technological innovations in global perspectives. Part I is three day lectures taught by Professor Kenji Uchino, world renowned researcher in piezo electric engineering as well as an established educator in the fields of technological innovations and entrepreneur education. This combines the lecture on technological innovations and writing workshop of successful proposal for fund raising as an entrepreneur.

Part II is three day intensive course taught by Professor Hiroshi Tanaka about “Project and Program Management for the Grand Design.”

Part III is follow-up half day forum held once in month or two months to review the topics for this course.

**Participants:** Total 30 some students and professionals which Ideal constituents are half Japanese students and half non-Japanese students, 15 MBA candidate and 10 graduate students with engineering/science/medical background, and 10 professionals including professors and post-doctoral students. Part 1 and 2 adopt group work method in addition to lectures. Participants are selected based on applicant’s background, age, and professions.

**Teaching Method :** lectures, project and program management, and discussion with guest speakers.

**Course Material :** No single text book is assigned. Documents and teaching materials are distributed electronically. We use “Slack” service for distribution of materials and share the e-mail based communication.

**Requirement for certificate:** Attend Module 1 and 2 in summer intensive course with fulfillment of presentation and report.

**Requirement for credit:** Attend Module 1 and 2 in summer intensive course with fulfillment of presentation and report. And the group work and the attendance of follow-up forums in fall semester (September-December) and the final presentation and report of group work either of Module 1 or 2 due on December 17, 2018.

**Fees:** Free for students, ¥60,000 for professionals (waived)

## **Detailed Program Information**

**Course** <http://www.dff.keio.ac.jp/activity/chairship/index.html>

[http://www.dff.keio.ac.jp/activity/chairship/2017/01\\_detail.html](http://www.dff.keio.ac.jp/activity/chairship/2017/01_detail.html)

**Grand Design by Japan** [http://anegawa.kbs.keio.ac.jp/Grand\\_Design\\_Project/](http://anegawa.kbs.keio.ac.jp/Grand_Design_Project/)

**Detailed Information (This Brochure)**

[http://anegawa.kbs.keio.ac.jp/Grand\\_Design\\_Project/doc/Grand\\_Design\\_by\\_Japan\\_20180721.pdf](http://anegawa.kbs.keio.ac.jp/Grand_Design_Project/doc/Grand_Design_by_Japan_20180721.pdf)

**Movies** : <https://www.youtube.com/user/KeioGrandDesign>

<Advantages> This is a technology management with cross-section disciplines, cross-generation, and professional education

1. Intensive lectures by a world renowned professors in various fields
2. Intensive project and program management lectures and workshop by leading professors
3. Forum with more than ten renowned professors and professionals
4. Main focus is on crisis, sustainability, and health

<Three Modules>

Module 1 3 Day lectures by Professor Kenji Uchino (Penn State University, Professor) based on his new text book.

Module 2 3 Day lecture and workshop of Project and Program Management by Professor Hiroshi Tanaka (SKEMA, Business School in France)

Module 3 Follow-up forum on technological innovation by more than ten professors, businessmen, and professionals and Final presentation by participants.

<Language> English and/or Japanese (Most of professors command both)

<Students and Participants> Those who are committed to create technology-based solution

<Schedule> July 21-22, 28-29, August 4-5 (whole one day 10:00 AM-18:00, Required for credit).

<Follow-up Forum (required for credit)> half day forum on selected topics every month or two months.

The following Keio Teaching Session schedule will be adjusted upon class organization.

1<sup>st</sup> session 9:00-10:30

2<sup>nd</sup> session 10:45-12:15

3<sup>rd</sup> session 13:00-14:30

4<sup>th</sup> session 14:45-16:15

5<sup>th</sup> session 16:30-18:00

### **Introduction and Overview of the Course**

Professor: Tomofumi Anegawa (Keio University)

Schedule: Day1, 9:00-10:30 Orientation no class count

### **Module 1 Three Day Intensive Lectures on Global Crisis/Sustainability Technologies**

#### **Led by Professor Kenji Uchino (12 Sessions)**

Invited Lecturer: Professor Kenji Uchino (State University of Pennsylvania)

Title of Lecture: Global Crisis/Sustainability Technologies

Textbook: Global Crisis/Sustainability Technologies (World Scientific 2017)

Content: Provide an overview of crisis, sustainability technologies based on his new book. It covers politics and technology, trend, risk management, and crisis technology and sustainability technology.

#### **Schedule: Day 1 10:45- 18:00,**

Chap 1: Background of Politico Engineering – 2 hours

Chap 2: Japanese & Global Technology Trend Change – 1 hour

Chap 3: Global Politics in Engineering – 1.5 hours

Chap 4: Categorization of Politico Engineering – 1.5 hours

#### **Day 2 10:45-18:00 Introduction to Proposal Writing**

Chap 5: Crisis Technology – 2 hours

Chap 6: Sustainability Technology – 1 hour

Chap 7: Risk Management – 3 hours

**Day 3 10:45-18:00**

Chap 7: Risk Management (Cont.) – 1 hour

Chap 9: Concluding Remark & Discussions with Students – 1 hour

Workshop for Proposal Writing, Presentation

**Module 2. Project and Program Management Seminar for the Grand Design led by Professor Hiroshi Tanaka Jointly with Ms. Taeko Inoue and Ms. Yuko Nagatani (10 Sessions)**

**Schedule, Day 1 10:45-18:00**

Onsite registration

Opening and Introduction

Session 1 Introduction to Projects

Session 2 Developing a Project for Innovation and Grand Design

- Project development fundamentals
  - Four routes of conception of innovation projects:
    - 1) Systems approaches – hard and soft
    - 2) Program management
    - 3) Brain-storming using common management theories
    - 4) Service innovation

Financial analysis by the Net Present Value (NPV) method

**Schedule, Day 2 10:45-18:00**

Session 3 Project Management

- Universal concept of project management
- Project management work flow

- Plain objectives of project management
- Project scope planning and management
- Quality in project management
- Project time management
- Project resources management
- Project cost planning and management
- Project risk analysis and management
- Project formation and organization
- Project integration management

**Schedule, Day 3 13:00-16:15 (2 Sessions)**

- Session 4 Project Management Workshop
- Strategy brainstorming on a group-selected project theme
- Setting a project mission, value analysis, development of a project proposal
- Stakeholder analysis, organization, work breakdown structure (WBS), project schedule, cost estimate, Finance planning, project execution strategy
- Compiling & editing a result presentation file
- Result presentation
- Wrapping up the seminar

**Module 3 Forum Series led by Professor Anegawa**

A half day forum on various topics and projects held in Module 1 and 2.

<Example of 2017 Program>

**Schedule Day 1 (3 Sessions)**

13:00-18:00    Forum 1, Technology for Crisis and Sustainability

Invited lecturers including:

Helmut Prendinger (Professor, National Institute of Informatics Japan) “Deep Learning”

Yumiko Nishimura(Health2.0), “The State of Art Consumer Health Application”

Kazuhiro Sakurada (Senior Researcher, Sony Computer Science Laboratories, Inc.) ” Prescription for human health“

Note: Grading will be made for students taking this course (Grand Design Project III) for credit as of Mid-August based on class participation, reports, presentations for Module 1, 2 and forum in August.

### **Schedule Follow-up forum on Technological Innovations and Education Program**

Forum A, <Technologies of Crisis and Sustainability>

Koji Kato(Emeritus Professor of Tohoku University and Senior Researcher at Nippon University)  
“Sustainable Lifestyles and the House”

Toshiharu Ikaga (Professor of Keio University, Graduate School of Science and Technology) “House and Health (tentative)”

Masahiro Kami (President of Medical Governance Research Institute) “Fukushima and Health(tentative)”

Forum B<Technologies for Health>

Eiji Sasahara (Healthcare Cloud Director) “Health IT(tentative)”

Yasuyoshi Watanabe (Riken, Director of the Center for Life Science Technologies) “Maximization of Individual Health” <https://rc.riken.jp/en/>

Hiryoyuki Yoshihara (Emeritus Professor, Miyazaki University and Kyoto University) “The Thousand Year Project of Patients Record(tentative)”

And other renowned speakers

Presentation by students

The follow-up forum will be held for each issue covered in Module 1 and 2 in the above schedule and other additional occasions. Students and participants are expected to report their project results as a team.

<Application Form>

## Keio University Business School

### Open Summer 6 Day Intensive Course and Follow-up Forum

#### Grand Design Project I

#### Technological Innovations in Global Perspectives

#### 2018 Summer Intensive Lectures and Workshop

#### Plus Fall Semester Follow-up Forums

### Application

**Keio Science and Engineering Students for credit : register by June 29 at Yagami**

**Other Keio students for Credit: register by July 2, 11AM at KBS**

**Others for certificate: apply by July 9 Selection is announced by July 9.**

**Fax.045-562-3502 or keio.grand.design@gmail.com**

Both Japanese and English information is required if available.

Name (氏名) English: \_\_\_\_\_, Japanese: \_\_\_\_\_.

Name of School, Department (if available) (学校名・所属学部/研究科名)

English: \_\_\_\_\_, Japanese: \_\_\_\_\_.

Year (学年) Undergraduate /Master /Ph.D.

Name of Affiliation, Position (if available) (勤務先・役職)

English: \_\_\_\_\_, Japanese: \_\_\_\_\_.

Address (住所) Japanese 〒 \_\_\_\_\_.

English \_\_\_\_\_.

Contact (連絡先) Tel.: \_\_\_\_\_ Fax.: \_\_\_\_\_ E-mail \_\_\_\_\_ :

Your additional personal profile if any \_\_\_\_\_.

上記申込者は、フォーラム参加にあたって、本プログラム別紙『フォーラム・シンポジウムおよび講演・授業・セミナー等の記録について承諾書』の個人情報保護、撮影、記録、配信等の覚書が適用されます。

General principles regarding to an individual participant information, recording and storing pictures of the event, and documentation are applied as shown in 『フォーラム・シンポジウムおよび講演・授業・セミナー等の記録について承諾書』(in Japanese). Written agreement will be asked when you participate in the forum.

**Please fill in check  of you attendance**

**Part1 Summer 6 Day Intensive Course**

Module I Three Day Intensive Lectures on Global Crisis/Sustainability Technologies

July 29, Saturday 10:45- 18:00, with orientation

August 4 Saturday 10:45-18:00, 2nd Day

August 5 Sunday 10:45-18:00, 3rd Day

Module II. Project and Program Management Seminar for the Grand Design

July 21, Saturday, 10:45-18:00, with orientation

July 22, Sunday 10:45-18:00

July 28 Saturday 9:00-

**Part 2 Follow-up Forum and Workshop**

Module 3 Follow-up forum Series (half day on various issue in September 2018 – December 17, Once in every one or two months) Final Presentation is on December 17.

**Venue: Cass Room B. Kyoseikan 4F Kyoseikan, Hiyoshi campus**

**Inquiry and Contact Information**

Office of the Grand Design by Japan Program

Graduate School of Business Administration, Keio University,

4-1-1 Hiyoshi Kohoku-ku, Yokohama-city, Japan 223-8526

Tel. 045-564-2015, Fax. 045-562-3502, E-mail: [keio.grand.design@gmail.com](mailto:keio.grand.design@gmail.com) Anegawa

申込方法 1 この Application Form を [keio.grand.design@gmail.com](mailto:keio.grand.design@gmail.com) あるいは 045-562-3502 (Fax) にお送りください。同じものは [http://anegawa.kbs.keio.ac.jp/Grand\\_Design\\_Project/](http://anegawa.kbs.keio.ac.jp/Grand_Design_Project/)

[http://anegawa.kbs.keio.ac.jp/Grand\\_Design\\_Project/index.html](http://anegawa.kbs.keio.ac.jp/Grand_Design_Project/index.html) からもダウンロードできます。

申込方法 2 メールフォーム [http://anegawa.kbs.keio.ac.jp/Grand\\_Design\\_Project/infoforum.html](http://anegawa.kbs.keio.ac.jp/Grand_Design_Project/infoforum.html)

申込方法 3 下記に氏名その他を御登録いただければ今回の参加申し込みができます。また、今後の企画案内送付を差し上げます。 [https://anegawa.kbs.keio.ac.jp/Grand\\_Design\\_Project/application/](https://anegawa.kbs.keio.ac.jp/Grand_Design_Project/application/)

最終参加者は 7 月 9 日に決定します。