

2024 年度 第3学期 工学部 学部共通専門教育科目		日英区分: 英語
工学安全教育 Safety and Security Managements for Engineer		
講義番号	科目区分	学期
090243		第3学期
ナンバリングコード		教室
MDBZ0ENJZ1001N		一般教育棟A21教室
必修・選択の別		メディア授業科目
		—
単位数	曜日・時限	
2	金5～6	
担当教員 (ローマ字表記)		
田野 哲 [DENNO Satoshi], 明石 卓也 [AKASHI Takuya], YUCEL ZEYNEP [YUCEL ZEYNEP], 平木 英治 [HIRAKI Eiji], 山内 利宏 [YAMAUCHI Toshihiro]		

対象学生

Faculty of Engineering, Department of Electrical and Communication Engineering (2016～2020) students
 Faculty of Engineering, Department of Information Technology (2017～2020) students

他学部学生の履修の可否

対象学生の項目を参照

連絡先

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オフィスアワー

Questions on the lectures etc. will be entertained where possible so long as the time permits. Advanced notice is recommended.

学部・研究科独自の項目

Articles needed for each faculty are described.

使用言語

日本語

授業の概要

In order to achieve the following goals, the lectures will provide more specific information on

1. Meaning of safety and fundamentals of safety engineering,
2. Type of disasters and risks and countermeasures,
3. Response method in an emergency,
4. Accountability to society.

学習目的

These lectures aim to let students in the engineering faculty acquire practical skills and understanding of techniques to promote safety, and to acquire the basic knowledge required to ensure safety in their experiments and research activities.

到達目標

To acquire the basic knowledge required to safely execute experiments, practical training and research as a student in the engineering faculty. To acquire the basic knowledge required to correctly convey information concerning technical safety required by society as a scientist and engineer.

■ 授業計画

Lesson 1 Lecture guidance (conduct of lecture, explanation of contents)

General 1 Meaning of safety and danger (responsibilities of an engineer, risk factors=equipment + people + environment, safety management), safety laws (Industrial Safety and Health Law, Fire Services Act, related laws)

Lesson 2 General 2 Safety and human aspects of risks (safety and security, risk and insecurity, understanding and explanation of risks), risk communications (psycho-social aspects in accountability)

Lesson 3 General 3 How to enact safety measures (preventive measures, localized measures, protective gear, equipment, improvement proposals, others)

Lesson 4 Technique 1 Risk factor analysis-1 (fishbone chart, repeating the 5 whys)

Lesson 5 Technique 2 Risk factor analysis-2 (production of close call reports, drafting of proposals on accident prevention)

Lesson 6 Basic knowledge of emergency responses (fire, earthquake, gas leak, water leak, flooding) and emergency measures (resuscitation, hemostasis, burns, poisoning, others)

Lesson 7 General information on electrical safety (electric shock, short-circuiting accident, electrical discharge, security when using a computer and network)

■ 授業時間外の学習(予習・復習)方法(成績評価への反映についても含む)

Students are recommended to review the class.

■ 授業形態

(1)授業形態-全授業時間に対する[講義形式];[講義形式以外]の実施割合

100% : 0%

(2)授業全体中のアクティブ・ラーニング

協働的活動(ペア・グループワーク、ディスカッション、プレゼンテーションなど)

やや少ない

対話的活動(教員からの問いかけ、質疑応答など)

少ない

思考活動(クリティカル・シンキングの実行、問いを立てるなど)

やや少ない

理解の確認・促進(問題演習、小テスト、小レポート、授業の振り返りなど)

多い

(3)授業形態-実践型科目タイプ

該当しない

(4)授業形態-履修者への連絡事項

The lecture is principally based on the textbook.

Blackboard and PowerPoint slides are also used if necessary.

■ 使用メディア・機器・人的支援の活用

視聴覚メディア(PowerPointのスライド、CD、DVDなど)

多い

学習管理システム(Moodleなど)

やや少ない

人的支援(ゲストスピーカー、TA、ボランティアなど)

少ない

履修者への連絡事項

The teachers talk while pointing pictures on power point slides. Students who have visual impairment should inform the teachers the difficulty in advance.

■ 教科書

備考

The text of Safety and Security Managements for Engineer will be sold at cost before the start of the lectures.

■ ■ 参考書

備考

Materials are delivered if necessary.

■ ■ 成績評価基準 (授業評価方法)

Evaluation shall be based on the reports and mini-tests conducted during the lectures.

■ ■ 受講要件

Nothing in particular. General social knowledge is desirable.

■ ■ 教職課程該当科目

No

■ ■ JABEEとの関連

NA

■ ■ 持続可能な開発目標 (SDGs)

■ ■ 実務経験のある教員による授業科目

■ ■ 備考 / 履修上の注意

The content of the lecture differs slightly from program to program. This lecture is equivalent to "safety education" under the Industrial Safety Law. If you are unable to attend due to unavoidable circumstances, be sure to contact the instructor in charge in advance and receive instructions.

This class will be divided into classes, which will be announced on the bulletin board.