平成23年度春学期

Spring Semester, 2011

電気通信大学・短期留学プログラム

UEC Exchange Program

Japanese University Studies

in Science and Technology

(JUSST)

Center for International Programs and Exchange (CIPE)

The University of Electro-Communications (UEC), Japan

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Enrolment　http://130.153.137.70/abroad/

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Communication Theory & Communication Theory Laboratory

（Monday #1 & Friday #5）

Communication Theory

Day of Class Monday #1

Credit 2

Lecturer Professor Noboru TOYAMA

E-mail toyama@fedu.uec.ac.jp

Textbook "Modern Digital and Analog Communication Systems, Third Edition, by B.P.Lathi (Oxford University Press, 1998).

Prerequisites Trigonometric identities, Integrals, Fourier series, some basic knowledge of probabilities and LCR circuits. Students are encouraged to take "Communication Systems" open at the fall semester.

Course Description

This course is an exercise session for the course "Communications Theory." This course must be taken concurrently with the course "Communications Theory Laboratory." Students will be given problems directly related to the lecture given in "Communications Theory." By solving the problems students can understand the real aspects of the theory given in the lecture. Some experiments related to the lectures will also be given.

Assessment policy:

The same scores given in the course "Communications Theory Laboratory."

Information and Communication Networks

Day of Class Monday #2

Credit 2

Lecturer Eiji OKI

E-mail oki@ice.uec.ac.jp

Objectives:

The course Objectives are to understand the fundamental structures and functions of modern networks. The course is also aiming that students get ability to read the reference books and papers, and to obtain the new knowledge regarding future network technologies.

Outline of Class and Contents:

The following subjects are lectured in English. The subjects include mainly three parts, which are Internet Protocol (IP)-based networks, performance analysis and network design, network optimization.

Part I: IP-based networks

- Network basis (1)
- TCP/IP overview (2)
- IP protocol basics (3)
- Tools for IP network monitoring (4)
- Routing protocols: IGP (5)
- Routing protocol: EGP (6)
- IP routers and switches (7)
- TCP/IP Socket programming I (8)
- TCP/IP Socket programming II (9)
- Multi-Protocol Label Switching (10)

Part II: Network design and performance analysis:

- Network optimization (11)

- Analysis for Network Performance (12)
- Network coding (13)

Part III: Advanced research topics

- Research topic I (14)
- Research topic II (15)

Assessment Policy:

Methods:

Homework (70%) : several reports are required to submit

On-site quiz (30%) : several quizzes are required to submit in the class.

Criteria:

Fundamental knowledge (50%)

Understanding of advanced concepts (50%)

Antenna Engineering

Day of Class Monday #2

Credit 2

Lecturer Professor Noboru TOYAMA

E-mail toyama@fedu.uec.ac.jp

Textbook

Time-Harmonic Electromagnetic Fields" written by R.F. Harrington (McGRAW-HILL)

Prerequisites Electromagnetic Theory

Course Description

Objectives:

A device whose primary purpose is to radiate or receive radio waves is called antenna. Wherever we are, We can see one or two antennas around us that are sending you signals or waiting for you to send signals. The purpose of this course is to enable students to understand the basic concepts of various antennas.

Outline of Class and Contents:

1. Brief explanatins of various antennas
2. transmission-line concepts
3. waveguide concepts
4. resonator concepts
5. radiation
6. antenna pattern calculation
7. practical examples of recently developed antennas
8. Some experiments on the selected items from the above will also given.

Assessment Policy:

Report, final examination and attendance rate.

Advanced Quantum Mechanics

Day of Class Monday #2

Credit 2

Lecturer Professor shinichi watanabe

E-mail shin@pc.uec.ac.jp

Textbook none

Prerequisites Elementary quantum mechanics at an undergraduate level

Course Description

Objectives:

Theme: To understand the basic principles of quantum mechanics that apply to various quantum phenomena serving as foundations of Modern Science and Technology.

Goals: To understand the quantization of energy, momentum and angular momentum. To understand the quantum interference. To understand how light interacts with matter. To understand the quantization of the Electro-Magnetic fields and of the matter wave.

Contents (tentative):

(1) What's an atom?

(2) What's spin?

(3) What's the atomic clock?

(4) Quantum interference and interferometric measurements

(5) Quantization of Electric and Magnetic fields

(6) Quantization of the Matter Wave

(7) Laser and atoms

Assessment Policy

(a) The grade will be based on an oral presentation and the term paper.

(b) It is required that the student understands the class room materials to such an extent that they can explain the basic concepts by heart.

Keywords: Quantum, atomic energy levels, spin, matter wave, quantum interference, laser, atomic clock, photon

Micro Mechatronics

Day of Class Monday #4

Credit 2

Day of Class Monday #4

Lecturer Professor Hisayuki Aoyama

E-mail aoyama@mce.uec.ac.jp

Textbook Mechatronics, 3rd Edition. Electronics and Control System in Mechanical and Electrical Engineering, W.Bolton

Prerequisites Mechanical and Electrical Engineering, Control Engineering

Course Description

Objective:

The integration of electronic engineering, electrical engineering, computer technology and control engineering with mechanical engineering is increasingly forming a crucial part in the design, manufacture and maintenance of a wide range of engineering products and processes. A consequence of this is the need for engineers and technicians to adopt an interdisciplinary and integrated approach to engineering. The term mechatronics is used to describe this integrated approach. A consequence of this approach is that engineers and technicians need skills and knowledge that are not confined to a single subject area. They need to be capable of operating and communicating across a range of engineering disciplines and linking with those having more specialised skills. In this class, an attempt to provide a basic background to mechatronics and provide links through to more specialised skills is given.

Outline of Class and Contents:

[1]: Mechatronics

Appreciate what mechatronics is about.

Comprehend the various forms and elements of control systems: open-loop, closed-loop and sequential.

Recognise the need for models of systems in order to predict their behaviour.

[2]: Sensors and transducers

Describe the performance of commonly used sensors.

Evaluate sensors used in the measurement of: displacement, position and proximity; velocity and motion; force; fluid pressure; liquid flow; liquid level; temperature; light.

Explain the problem of bouncing when mechanical switches are used for inputting data.

[3]: Signal conditioning

Explain the requirements for signal conditioning.

Explain how operational amplifiers can be used, the requirements for protection and filtering, the principle of the Wheatstone bridge and, in particular, how it is used with strain gauges, the principles and main methods of analogue- to-digital and digital-to-analogue converters, multiplexers and data acquisition using DAQ boards.

Explain the principle of digital signal processing.

Explain the principle of pulse-modulation.

[4]: Data presentation systems

Explain the problem of loading.

Describe the basic principles of use of commonly used data presentation elements: meters, analogue chart recorders, oscilloscopes, visual display units, printers.

Explain the principles of magnetic recording on floppy and hard discs.

Explain the principles of displays and, in particular, the use of LED seven-segment and dot matrix displays and the use of driver circuits.

Explain how data presentation can occur with the use of DAQ boards. Design measurement systems.

[5]: Pneumatic and hydraulic actuation systems

Interpret system drawings, and design simple systems, for sequential control systems involving valves and cylinders.Explain the principle of process control valves, their characteristics and sizing.

[6]: Mechanical actuation systems

Evaluate mechanical systems involving linkages, cams, gears, ratchet and pawl, belt and chain drives, and bearings.

[7]: Electrical actuation system

Evaluate the operational characteristics of electrical actuation systems: relays, solid–state switches (thyristors, bipolar transistors and MOSFETs, solenoid actuated systems, d.c. motors, a.c. motors and steppers).

[8]: Basic system models

Devise models from basic building blocks for mechanical, electrical, fluid and thermal systems.

[9]: System models

Devise models for rotational–translational, electro–mechanical and hydraulic–mechanical systems.

[10]: Dynamic responses of systems

Model dynamic systems by means of differential equations.Determine the response of first– and second–order systems to

[11]: System transfer functions

Define the transfer function and determine the responses of systems to simple inputs by its means, using Laplace transforms.Identify the effect of pole location on transient response.Use MATLAB and SIMULINK to model systems.

[12]: Frequency response

Analyze the frequency response of systems subject to sinusoidal inputs.Plot and interpret Bode plots, using such plots for system identification.

[13]: Closed–loop controllers

Predict the behaviour of systems with proportional, integral, derivative, proportional plus integral, proportional plus derivative and PID control.

[14]: Mechatronics systems

Compare and contrast possible solutions to design problems when considered from the traditional and the mechatronic points of view, recognizing the widespread use of embedded

systems. Analyse case studies of mechatronics solutions.

Design mechatronics solutions to problems.

Assessment Policy:

There will be some report requirements on the topics mentioned above during the semester. And the practical mechatronics development will be given to inprove the mechatronics sense.

Assessment in this class will take account of (1)these reports,
(2)attendance-rate and (3)the prototype development with the score

proportion of 30%, 30% and 40%, respectively.lementary Japanese IIA is designed for students who completed Elementary Japanese IA or who have equivalent standards with over 150 Kanji vocabulary.

Optical Communication Engineering

Day of Class Monday #5

Credit 2

Lecturer Professor KISHI, Naoto

E-mail kishi@ice.uec.ac.jp

Textbook on-line materials available at http://pcwave3.ice.uec.ac.jp/kishi/optc (internal only)

Prerequisites Knowledge of basic engineering/ scientific concepts

Course Description

Objective:

Optical communication is one of the key technologies for the contemporary information society. It is hence important to understand the basic engineering concepts of optical communication. This course covers several topics in such optical communication technologies.

Outline of Class and Contents:

The following subjects are treated.

1. Tutorial introduction to optical fibre communication
2. Properties of lightwave for communication
3. Optical fibre transmission lines
4. Lightsources
5. Optical amplifiers
6. Various optical devices
7. Digital codings for optical communications
8. Optical communication systems
9. Optical fibre sensing systems

Assessment Policy:

Submission of a report will be required at the end of the term. Its subject may be fixed according to one's interested topics in the course. Assessment of this course will be made over the report and discussion in the class at the score proportion of 80% and 20%, respectively.

Machine Design Engineering

Day of Class Monday #5

Credit 2

Lecturer Professor Haruo Ishikawa

E-mail ishikawa@mce.uec.ac.jp

Course Description

Objective:

Main topics are design process in recent industry, including the industries of automobile, consumer home electronics and so on. Objective of the class is to understand the machine design process, that is, conceptual design, initial design, detailed design, life cycle design, environmental conscious design and concurrent engineering design.

Outline of Class and Contents:

・Introduction,

・Definition of machine and mechanism,

・Synthesis and Analysis,

・Design processes, including concept design, initial design, and detail design,

・Multi-objective satisfaction design,

・3D-CAD,

・Environment conscious design,

・Concurrent engineering design.

Assessment Policy:

There will be some report requirements on the topics mentioned above during the semester. Assessment in this class will take account of (1)these reports, and (2)attendance-rate with the score proportion of 50% and 50%, respectively.

Fundamentals of Quantum Electronics

Day of Class Tuesday #1

Credit 2

Lecturer Professo K. Hakuta and Dr. Fam Le KienI

E-mail fam@kiji.pc.uec.ac.jp

Textbook

1. Quantum Mechanics, by C. Cohen-Tannoudji, B. Diu, and F. Laloe (John Wiley & Sons, New York, 1977).
2. Optical Resonance and Two-Level Atoms, by L. Allen and J. H. Eberly (John Wiley & Sons, New York, 1975).
3. The Quantum Theory of Light, by R. Loudon (Oxford University Press, Oxford, 2000).
4. Quantum Optics, by M. O. Scully and M. S. Zubairy (Cambridge University Press, New York, 1997).

Prerequisites elementary quantum mechanics

Course Description

Objectives:

Resonant and near-resonant interaction of light with matter is a subject of study in various branches of physics, such as atomic and molecular physics, quantum electronics, nonlinear and quantum optics, and solid state physics. In this course, we present some fundamentals for the study of the interaction between atoms and light. The course opens with a brief description of real atoms and the model of two-level atoms. We then describe the electromagnetic field and its mode expansion. We explain the principles and elementary theory of the laser. We describe the interaction between atoms and laser fields. The density operator for atoms interacting with light is introduced. Interesting optical effects such as Rabi oscillations, spontaneous emission, absorption, emission, power broadening, coherent trapping, and electromagnetically induced transparency are discussed.

Outline of Class and Contents:

1. Classical theory of the interaction of light with matter.

2. Real atoms and the model of two-level atoms.
3. Electromagnetic field and its mode expansion.
4. Principles of the laser.
5. Interaction between atoms and laser fields.
6. Atom excitation and Rabi oscillations.
7. Spontaneous emission of an atom.
8. Density operator formalism.
9. Optical Bloch equations.
10. Absorption, saturation, and power broadening.
11. Propagation of light in an atomic medium. Susceptibility, refractive index, and absorption coefficient of the medium.
12. Coherent trapping and dark states.
13. Electromagnetically induced transparency.

Assessment policy:

At the end of the course, the student has to write a short report on a topic from the list. In the report, the student should demonstrate his understanding of the topic. Assessment in this class will take account of the attendance, discussion, and report.

Computational Modelling in Science and Engineering using MATLAB

Day of Class Tuesday #5

Credit 2

Lecturer Associate Professor Hans-Georg Matuttis

E-mail hg@mce.uec.ac.jp

Textbook

Hand-outs will be prepared in the class

Further Reading:

- Steve Macconnell, Code Complete, Microsoft Press, 1993,ISBN 1-55615-484-4
- C.W. Ueberhuber: Numerical Computation 1 Springer, 1997, ISBN 3-540-62058-3
- C.W. Ueberhuber: Numerical Computation 2 Springer, 1997 ,ISBN 3-540-59152-4
- Hairer, Norsett and Wanner: Solving Ordinary Differential Equations I, 2nd edition. Springer, 1993, ISBN 3-540-56670-8
- E. Hairer and G. Wanner, Solving Ordinary Differential Equations II 2nd edition, Springer 1996,ISBN 3-540-60452-9

Prerequisites

Knowledge of 1 procedural Computer language (Fortan, C, Pascal ....)

Course Description

Objectives:

Computational methods have replaced analytical methods already in many fields of science and engineering, and their importance is still increasing. The aim of the lecture is to provide fundamental criteria for the choice of numerical methods, give an overview about some available methods in some fields, and give ideas about performance-oriented implementation for such methods. Depending on the background and interest of the auditory, some subjects can be changed.

Outline of Class and Contents:

1. Simple MATLAB-Synthax
2. How to write better programs
3. Non-numerical methods: Monte-Carlo techniques
4. Representation of Numbers
5. Elementary numerical analysis: What are numerical errors, and how to get "correct" results from calculations "with error"
6. Graphics
7. Introduction to numerical Linear algebra and how to draw a line through more than 2 points (or maybe not)
8. Polynomials and Roots
9. Solving ordinary differential equations
10. Performance analysis: Which algorithm take long, which are fast, and when does it matter
11. Programming Paradigms: From spaghetti-code to object-orientation, and what does one really need in science and engineering

Assessment policy:

Presence in the lecture, weekly homework during the term and one mid-term exam and one at the end of the term.

Comment:

Participants should apply for an account at the Computer Center 1 Week before the start of the lecture, if possible !!!

Modern Optics and Photonics

Day of Class Wednesday #1

Credit 2

Lecturer Prof. Yasuo TOMITA

E-mail ytomita@ee.uec.ac.jp

Textbook Instructor's notes will be provided. Material will also be taken from the following optional textbooks:

1. Yariv, Optical Electronics in Modern Communications, Oxford Univ. Press, Oxford, 1997.
2. S.G. Lipson et al., Optical Physics, 3rd ed., Cambridge Univ. Press, Cambridge, 1995.
3. B.E.A. Saleh and M.C. Teich, Fundamentals of Photonics, Wiley, New York, 1991.

Prerequisites

A good understanding of introductory electromagnetics and linear systems theory may be helpful.

Objectives

This is an introductory-level course in the ever-increasing field of modern optics. It includes ray- and wave-descriptions of light propagation and image formation with coherent light. An introduction to holography and optical information processing is also given as an example of parallel and multi-dimensional data handling capabilities of light. Furthermore, it contains discussions of photonic devices (such as lasers, amplifiers, light modulators and detectors) and fiber-optic communications systems.

Outline of Class and Contents

Topics in 90-minute lectures will include:

1. Geometrical (ray) optics
2. Wave optics
3. Fourier optics
4. Electromagnetic and crystal optics
5. Guided-wave and fiber optics
6. Introduction to fiber-optic communications

Theory of Computation

Day of Class Wednesday #1

Credit 2

Lecturer Professor Kazuo OHTA

E-mail ota@ice.uec.ac.jp

Textbook Introduction to The Theory of Computation, Michael Sipser, ISBN 0-534-94728-X

Prerequisites The knowledge of the Introduction part of the text book will be required at least, for example, the basic concepts of sets, functions, relations, and Boolean logics.

Course Description

Objectives:

The course will cover the automata and languages as the introduction part of the computation theory. The mathematical logics will be exercised.

Outline of Class and Contents:

1. Introduction
    1. Definitions, Theorems, and Proofs
    2. Types of Proofs
2. Regular Language
    1. Finite Automata
    2. Nondeterminism
    3. Regular Expression
    4. Non-regular Languages
3. Context-Free Languages
    1. Context-free Grammars
    2. Pushdown Automata
    3. Non-context-free Languages

Assessment policy: Reports giving the answers of the exercises in the text book, contribution in the class discussions.

Advanced Theory of Systems Reliability

Day of Class Thursday #2

Credit 2

Lecturer Professor Kazuyuki SUZUKI

E-mail suzuki@se.uec.ac.jp

Textbook nothing (handout prints)

Prerequisites Calculus

Course Description

Objectives:

This lecture deals with Reliability Engineering and its theory which focus on the philosophy, ideas and scientific methods to build in quality and reliability into systems. Here, up-stream management plays an important role. Also, recent development of information technology has been changing the way of Reliability Engineering. This new aspects is also dealt with.

Outline of Contents

1. Information Technology and Reliability
2. TQM(Total Quality Management) and Reliability
3. Quality Assurance and Reliability Assurance
4. Reliability Failure Model and its Theory
5. Reliability Design
6. Reliability Testing and Data Analysis
7. Design of Experiments in reliability
8. Maintainability and Condition Monitoring Maintenance

Assessment policy:

Assessment will be based on the level of understanding

Modern Physics

Day of Class Thursday #4

Credit 2

Lecturer Prof. Pham Le Kien

E-mail fam@pc.uec.ac.jp

<http://kjk.office.uec.ac.jp/Profiles/0018/0001020/prof_e.html>

Textbook "Concepts of Modern Physics" by Arthur Beiser (McGraw-Hill, sixth edition, 2003).

Prerequisites NIL

Course Description

Objectives:

The theory of special relativity and the theory of "quanta" emerged at the turn of the 20th century as a fundamental framework for understanding macroscopic and microscopic aspects of the world. The theory of special relativity treats problems related to space and time. The quantum mechanics treats problems related to the building blocks of our world, namely atoms, molecules, and subatomic particles. This course consists of a series of lectures on the theory of special relativity and quantum mechanics. It presents basic concepts required of all branches of modern physics. The focus however is on ideas rather than on technical details or practical applications.

Outline of Class and Contents:

1) Length contraction

2) Time dilation

3) Relativistic mass

4) Doppler shift

5) De Broglie waves

6) Particle diffraction

7) Uncertainty principle

8) Atomic spectra

9) Correspondence principle

10) Principles of lasers

11) Wave equation: the Schroedinger equation

12) Particle in a box

13) Tunnel effect

Assessment policy:

A written report on a topic is to be submitted toward the end of the semester. An oral presentation based on the written report is also required.

Assessment in this class will take account of this report, attendance rate, and contribution for class discussions.

Visual Communications

Day of Class Thursday #5

Credit 2

Lecturer Professor Masahide KANEKO

E-mail kaneko@ee.uec.ac.jp

Textbook Handouts will be prepared in the class

Prerequisites NIL

Course Description

Objectives:

As represented by the famous proverb "Seeing is believing", visual information plays a very important role in our daily lives. In this class, the fundamentals of visual communication, especially image coding techniques, are lectured from the viewpoint of efficient transmission of image information and better communication through visual media. International activities to establish the common standards of image coding are also introduced.

Outline of Class and Contents

1. Visual media
    - Definition of "visual media"
    - Classification of "visual media"
    - Use of visual information in the fields of information and communication
2. Fundamentals to handle digital images
    - Definition of "digital image / digital picture"
    - Digitization : sampling + quantization
    - Amount of information contained in digital images
    - Characteristics of human vision
3. Visual communication and Image / Video Coding
    - Role of visual communication and image / video coding
    - Redundancies contained in images
    - Basic methods of image data compression

- predictive coding, transform coding, interframe coding, motion compensation, coding of facsimile (MH, MR,MMR)

4. International standards of image / video coding
   - JPEG, JPEG2000, JPEG XR, Motion-JPEG2000, JBIG,
   - H.261, H.263, H-264 (MPEG-4 / AVC)
   - MPEG-1, MPEG-2, MPEG-4, MPEG-7, MPEG-21
   - JPEG ==> Digital camera, Pictures used in Web site
     MPEG-2 ==> Digital broadcasting (satellite, terrestrial), DVD
     MPEG-4 ==> Digital movie camera, Video by mobile phone (One segment broadcasting), and so on
5. Video over Internet and over mobile network
   - Internet as transmission media of video
   - Streaming
   - Mobile network as transmission media of video
   - Error resilience coding

Samples of coded and decoded images will be demonstrated by OHP and video tapes.

Assessment policy:

There will be some report requirements on the topics mentioned above during the semester. One examination will be carried out at the end of semester.

Assessment in this class will take account of these reports, examination, attendance-rate and contribution for class discussions at the score proportion of 30%, 30%, 20%, and 20% respectively.

Digital Engineering in Broadcasting

Day of Class Friday #4

Credit 2

Lecturer Professor Noboru TOYAMA

E-mail toyama@fedu.uec.ac.jp

Textbook "Digital Television" written by H Beoit (Arnold)

Prerequisites Some knowledge of Fourier Analysis and Probability

Course Description

Objectives:

Digital terrestrial broadcasting is a very hot topic in Japan. Students will see some of the related items almost every day in the newspaper. Digital broadcasting uses the most sophisticated digital techniques. The purpose of the course is to give students, as simply and as completely as possible, the various aspects of the very complex problems to be solved in realizing digital broadcasting.

Outline of Class and Contents:

1. A review of current analogue TV,
2. digitization of video signals,
3. compression of video signals using Fourier cosine transform,
4. compression of video signals using motion compensation technique,
5. error correction using Reed-Solomon coding,
6. error correction using Viterbi decoding algorithm,
7. Trellis coded 8 PSK modulation,
8. Some experiments on the selected items from the above will also given.
9. Orthogonal frequency division multiplex.

Assessment policy:

Report, final examination and attendance rate.

Communication Theory & Communication Theory Laboratory

（Monday #1 & Friday #5）

Communication Theory Laboratory

Day of Class Friday #5

Credit 1

Lecturer Professor Noboru TOYAMA

E-mail toyama@fedu.uec.ac.jp

Textbook "Modern Digital and Analog Communication Systems, Third Edition, by B.P.Lathi (Oxford University Press, 1998).

Prerequisites Trigonometric identities, Integrals, Fourier series, some basic knowledge of probabilities and LCR circuits. Students are encouraged to take "Communication Systems" open at the fall semester.

Course Description

This course is an exercise session for the course "Communications Theory." This course must be taken concurrently with the course "Communications Theory." Students will be given problems directly related to the lecture given in "Communications Theory." By solving the problems students can understand the real aspects of the theory given in the lecture. Some experiments related to the lectures will also be given.

Assessment policy:

The same scores given in the course "Communications Theory."

生涯スポーツ演習 A(Lifelong Learning in Sports A)

1. Contents of the classes (授業内容)

This is a semester-long course, held in the first semester. It is approved as a one-credit course. Students may register for the following sports activities.

曜日 day of the week	時限 class hour	種目 sports activities	場所 venue	担当教員 teacher	定員 quota
火曜日 Tuesday	2限 2nd (10:40am ～)	フットサル (Futsal)	体育館 (gymnasium)	狩野 (Kano)	3
		合気道 (Aikdo)	武道場 (Judo gymnasium)	吉川 (Kikkawa)	3
		卓球 (Table Tennis)	第二体育館2階 (gymnasium Ⅱ)	田中 (Tanaka)	3
		トレーニング (Training&Fitness)	第二体育館1階 (gymnasium Ⅱ)	笹川 (Sasagawa)	3

2. Assessment (評価)

(1) Criteria (基準)

Students shall be assessed based on a possible total score of 100 points, consisting of
50 points based on attendance(出席点),
20 points based on skills(技能点),
20 points based on report(s)(レポート点),
and 10 points based on attitude and behavior(態度, マナー).

Scores of 90 and higher shall be assigned the grade AA (best:秀), scores of 80 · 89 the grade A (superior:優), scores of 70 · 79 the grade B (good:良), scores of 60 · 69 the grade of C (pass:可), and scores of 59 and lower the grade D (fail:不可).

(2) Attendance (出席)

As this is a hands-on course, **class attendance is considered particularly important**. For this reason, it is expected that all students will take proper care of their health and physical condition so that they can attend all class sessions. One absence will result in 3 points lost, and late attendance in 1 point lost.

Students will receive **no credit after losing 10 points or more**. In addition, **submittal of a report is a requirement for earning credit for this course**. Students who have not met this report requirement will not be graded.

3. Notes (履修上の注意)

(1) Checking the name of your teacher

Note that teachers vary depending on sport activity.

(2) Clothing

Students **must wear athletic clothing and athletic shoes.** Students will not be admitted in ordinary clothing or street shoes. Students must wear tennis shoes on tennis courts, and indoor shoes when using the gymnasium. Students can borrow Aikido-wear.

(3) Dressing rooms

Students should use the dressing rooms in the athletic facilities (the main gymnasium, gymnasium Ⅱ,or Judo-gymnasium).

(4) Equipment

Although rackets and other equipment are available for student use, students are welcome to use their own equipment.

(5) Valuables

Students should try to avoid bringing valuables to class. When bringing valuables to class is unavoidable, students are responsible for their safekeeping.

4. Others (その他)

(1) In principle, all instruction will be in Japanese.

(2) Attendance will be checked at every session.

(3) The quota of students specified in the above table cannot be exceeded.

5. Contact Information

Please contact Dr.Kikkawa with any questions you may have concerning registration for this course (e-mail:kikkawa@mce.uec.ac.jp). The office is E1-402.