

電気通信大学 平成21年度シラバス

授業科目名	(G)Applicable Modelling with Mathematics #1		
英文授業科目名	(G)Applicable Modelling with Mathematics #1		
開講年度	2009年度	開講年次	3、4年次
開講学期	前学期	開講コース・課程	昼間コース
授業の方法	講義	単位数	2
科目区分	総合文化科目-国際科目-		
開講学科・専攻	情報通信工学科 情報工学科 電子工学科 量子・物質工学科 知能機械工学科 システム工学科 人間コミュニケーション学科		
担当教官名	鈴木 雅久		
居室	P-619		

公開E-Mail	授業関連Webページ
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【主題および達成目標】
<p>この授業は、本学の海外協定校(姉妹校)から来ている交換留学生を対象とした英語で開講されている授業です。</p> <p>理工系の専門英語で勉強する機会として、正規生にも開講されており、海外で留学したときの授業を受講する雰囲気を経験できる授業です。</p> <p>Computer Simulation has become common to proceed in many areas of sciences and engineering. This class aims to do brain storming with several key topics of dynamics. From this exercise, we focus attention on how to establish mathematical modeling for your needs.</p>

【前もって履修しておくべき科目】
Students are require to be confident with O.D.E. P.D.E.

【前もって履修しておくことが望ましい科目】
Not applicable.

【教科書等】
Not applicable.

【授業内容とその進め方】

- #1 Orientation
- #2 Scientific Discussion on Rescaling Physics
- #3 Scientific Modelling on Rescaling Physics
- #4 Scientific Discussion on Population Dynamics
- #5 Scientific Modelling on Population Dynamics
- #6 Scientific Discussion on Chemical Physics
- #7 Scientific Modelling on Chemical Physics
- #8 Scientific Discussion on Epidemic Dynamics
- #9 Scientific Modelling on Epidemic Dynamics
- #10 Scientific Discussion on Perturbation Physics
- #11 Scientific Modelling on Perturbation Physics
- #12 Scientific Discussion on Chaotic Function
- #13 Scientific Modelling on Chaotic Function
- #14 Review of Scientific Modelling
- #15 Modelling Techniques

【授業時間外の学習（予習・復習等）】

There will be one task of maths calculation for every 2-weeks. You have to prepare your own answer for your solution in the form of presentation.

You need to spend 2 hours at minimum to prepare the solution for one task.

【成績評価方法及び評価基準(最低達成基準を含む)】

There is no examination at the end of semester. However, the evaluation will be given according to the following policies:

Assignments

Except for the projects, all other assignments are designed to be done during the class time. At the end of the theoretical explanation, students are given enough time to make the exercises and finish the assignment for the class. If students are not able to finish the class assignments during the class period, they have until 23:59 of the same day to submit the assignment by email. Assignments sum 20% of the final grade.

Evaluation is given as follows;

Attendance 10 %

Weekly Assignments 20 %

Proposals & Reports 35 %

Final Presentation 35 %

Total 100 %

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【オフィスアワー：授業相談】

Tuesday 12:00-13:00 at P-302 of UEC Building P.
Appointment Essential by E-mail in advance.

【学生へのメッセージ】

This is the most useful practice for your scientific presentation in English at UEC, since more than 20 international students participates in this excercises from more than 10 countries.

【その他】

Attendance and Punctuality

Students are expected to come to class on time and stay for the 2.0 hours. Absences are excused in case of emergency, sickness, trips to conferences. Attendance is weighted as 10% of the final grade. To obtain this 10% the student should have assist 90% of all classes of the semester.

Class Participation

We expect students to be the active part of the learning process. We encourage the participation of students with questions, discussions, and comments. If you have anything interesting to say about the topics this course covers please feel free to share with the others in open forum.