Report

Dear Sir or Madam,

We appreciate for your cooperation.
We would like to utilize feedback from your opinion in the near future.
Please make a report on your lecture in English.
This report will be posted on the website of Hiroshima University.

Sincerely,
Graduate School of Engineering, Hiroshima University

(1) Name of Lecturer:
Emin Semih Perdahcioglu

(2) Position:
Assistant Professor

(3) Affiliation:
Group of Nonlinear Solid Mechanics, Faculty of Engineering Technology, University of Twente, Netherlands

(4) Short Biography:
Dr. E.Semih Perdahcioglu joined University of Twente, Netherlands in 2012 as Assistant Professor in Section of Applied Mechanics. Prior to that, he finished several projects as a Postdoctoral researcher in association with Materials innovation institute, M2i and University of Twente. He is specialized in the research field of physically based material modeling. Some of his ongoing projects include modeling of micro-forming chain processes, laser-assisted forming, modeling of anisotropic damage and anelastic behavior. He is one of the co-organizers of the 'Forming Technology Forum' and the 'Material behavior' mini-symposium in the ESAFORM conference.

(5) Subject and Schedule of the Lectures:
Non-linear Solid Mechanics

11th of October 12:50 - 14:20 at 109
An overview of the current state-of research carried out in the field of physically based material modeling. This includes mechanically induced martensitic transformation, strain gradient enhanced plasticity and formability of advanced high strength steels during stretch-bending type of deformation.

13th of October 14:35 - 16:05 at A3-343
Introduction to elastoplasticity. Formulation of 1D and 3D elastoplasticity for elastic-rigid plastic material behavior. Drucker's postulate, normality rule and convexity requirement are explained.

14th of October 10:30 - 12:00 at A3-343
Derivation of the Tresca and Von Mises yield criteria. Physical bases for hardening are explained followed by isotropic and kinematic hardening models.

18th of October 12:50 - 14:20 at A3-343
Stress-strain relation is once again derived for general elastoplasticity with hardening. Von Mises yield surface with isotropic hardening is formulated. The general ODE form of the problem is given and s

but found it little challenging. For mechanical engineering graduates to have a hands-on experience with elastoplasticity gives them a lot of confidence and advantage in their future career.

(If possible, please attach photos of your lecture.)