**University of California, Davis**

**Fall 2018**

**TTP 289A-006, CRN 41045, Wed 14:10-16:00, 201 Wellman**

**Pavement for Managers**

**Instructor: John Harvey -** jtharvey@ucdavis.edu; campus telephone: 530-754-6409; mobile: 510-206- 8349; office: 3153 Ghausi Hall; office hours: after class and by appointment.

1. COURSE DESCRIPTION

Concepts and knowledge needed by planners and managers to understand pavements, including discussion of all urban hardscapes. Includes basic understanding of materials, design, construction, maintenance and rehabilitation and end-of-life, and how these influence costs, environmental impacts and societal impacts. Discussions of asset management, pavement finance, new types of pavement for different purposes (permeable pavement for stormwater management, pavements with lower tire/pavement noise, pavements and bicycle ride comfort, etc). How to communicate pavement issues with decision-makers. Discussion of alternatives to current approaches for providing pavement functionality (different materials and structures).

No required text. Some materials will be distributed in class. Most materials are available on the class web page through Smartsite.

Reading assignments will be made from the FHWA Pavement Sustainability Reference Document available at: <https://www.fhwa.dot.gov/pavement/sustainability/ref_doc.cfm>

Other information will be referenced to Pavementinteractive: <http://www.pavementinteractive.org/>

II. GRADE DETERMINATION

Individual and Group Projects 40 %

Pavementinteractive and FHWA reading quizzes 30 %

Participation 30 %

Individual or group projects

* Subject to be identified by October 25 by student(s)

IV. LECTURE SUBJECTS

See lecture schedule for this year.

* Overview of pavements
* Pavement types, materials and distress mechanisms
* Construction, operations, scheduling, quality, work zones and traffic
* Pavement design
* Pavement management
* Maintenance and rehabilitation
* Use stage: pavement vehicle interaction, stormwater, noise, heat island, active transportation
* Pavement financing
* Pavement LCA and other tools
* Working with decision makers
* Internal and external forces affecting pavements to 2050