UNIVERSITY OF ARKANSAS
COLLEGE OF ENGINEERING

Education and Outreach

University-Based Asphalt Materials and Flexible Pavement Education

Fall 2017 Update

Expert Task Group (ETG) on Asphalt Mixtures
Bozeman, Montana
September 21, 2017

UNIVERSITY OF ARKANSAS
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Our Chat Today…

- The pavement education landscape
- Actions since May 2017
- Getting a start on curriculum
- Next Steps

Education and Outreach

The Landscape

- Academia
- Industry
- Agency

Actions

- Ad-hoc task group: Education Outreach

  Kevin Hall (Univ of Ark)
  Dave Newcomb (TTI/Tx A&M)
  Mark Blow (AI)
  Stacy Glidden (Payne & Dolan)
  Frank Fee (Consultant)
  Rebecca McDaniel (NCSC / Purdue)
  Louay Mohammed (LSU / LTRC)
  Erv Dukatz (Mathy)
  Adam Hand (UNR)
  Shane Buchanan (Oldcastle)

- Asphalt Institute Pilot Program: Instructional Materials
  - MS-2; MS-4; MS-22
- Oldcastle National Mix Design Competition
  - Pilot run: 2018-19 Academic Year

Curriculum:

The BOK at the Undergraduate Level

- First taste, *mix design*:
  2 weeks in “materials” class
- First taste, *pavements*:
  2 weeks in “transportation” class
- Undergraduate elective:
  “pavement engineering”

Curriculum:

The BOK at the Undergraduate Level

First taste, *mix design*: 2 weeks in "materials" class

LECTURE
6 contact hours

1: Mix types; materials; terminology
2: Volumetric properties; volumetric analysis
3: Gradation specifications; aggregate quality
4: Binder specifications; Binder selection
5: Gyratory compaction; Determination of design binder content
6: Moisture susceptibility; performance testing

LAB
2 sessions (6 hours)

1: Mixing and compaction
if equipment available
(no aging) (rapid cooling)

Gmb & Gmm testing

2: Demo tests:
if equipment available

moisture damage
cracking / rutting
binder content

Curriculum: Next Steps

The BOK at the Undergraduate Level

3 Teams:

- First taste, *mix design*: 2 weeks in "materials"
- First taste, *pavements*: 2 weeks in "transportation"
- Undergraduate elective: "pavement engineering"

Process:

- Collect examples of curricula (syllabi, etc.)
- Draft curriculum; circulate to larger group
  - Respond to comments; modify as needed
- Identify classroom / lab needs
- Identify possible resources to meet needs

Target Draft delivery: January 2018

Still to come…

- Graduate curriculum / Body of Knowledge
- Faculty Development
- Open-Access Instructional Materials
- Bringing the Lab to All

KEY: Coordinating with Other Efforts / Groups!!!