Online Learning Materials

- JoVE – Visualized experiments

- MERLOT - repository for online learning materials, digital case story repository, Open textbook etc.

JoVE (Journal of Visualized Experiments)

- A peer-reviewed scientific journal
- Publishes experimental methods in video format
- Publisher: MyJove Corp., Cambridge, MA
- Impact Factor: 1.108
- Focuses on creating two types of scientific videos
  - Video Journal – peer reviewed video method journals
  - Science Education Library – teaching fundamentals through video demonstrations

JoVE

jove VIDEO JOURNAL

Our peer-reviewed journal combines high-quality video demonstrations of experiments with a detailed text protocol, allowing researchers around the globe to learn from each other easily and efficiently. This saves a lot of their time, money and laboratory resources. The fields covered include: Biology, Neuroscience, Medicine, Bioengineering, Engineering, Genetics, Cancer Research, Immunology and Infection, Chemistry, Behavior, Environment, Developmental Biology, and Biochemistry.

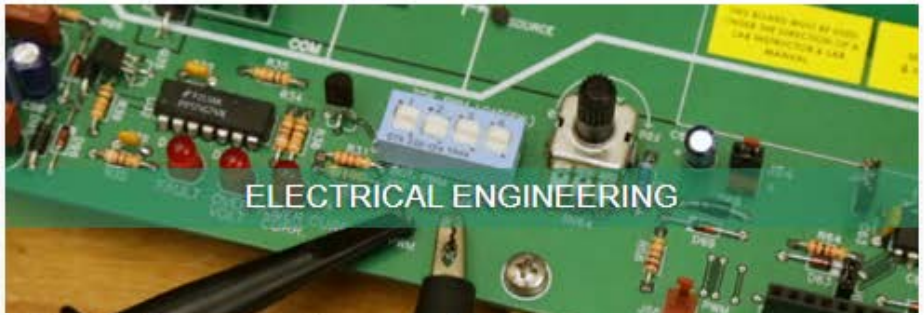
Limited availability

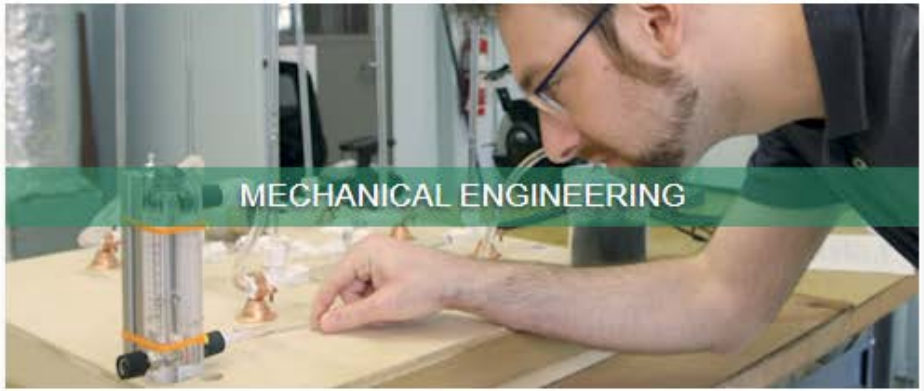
jove SCIENCE EDUCATION

Educators and students use our innovative video collections in the JoVE Science Education Library to better teach and learn key concepts and fundamental techniques at the undergraduate course level. These simple, easy-to-understand video demonstrations cover a wide range of STEM subjects including Biology, Chemistry, Environmental Science, Psychology, Clinical Medicine and Engineering.

Available and can be accessed using ISU Net-ID


BIOENGINEERING

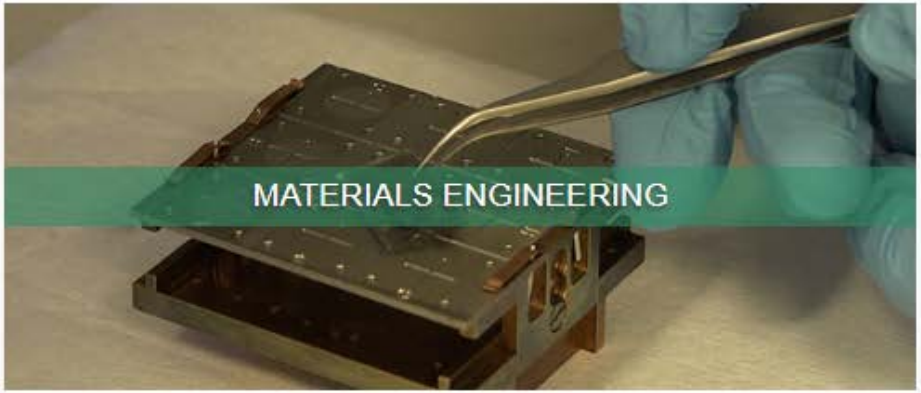

ELECTRICAL ENGINEERING


MECHANICAL ENGINEERING


CHEMICAL ENGINEERING


STRUCTURAL ENGINEERING

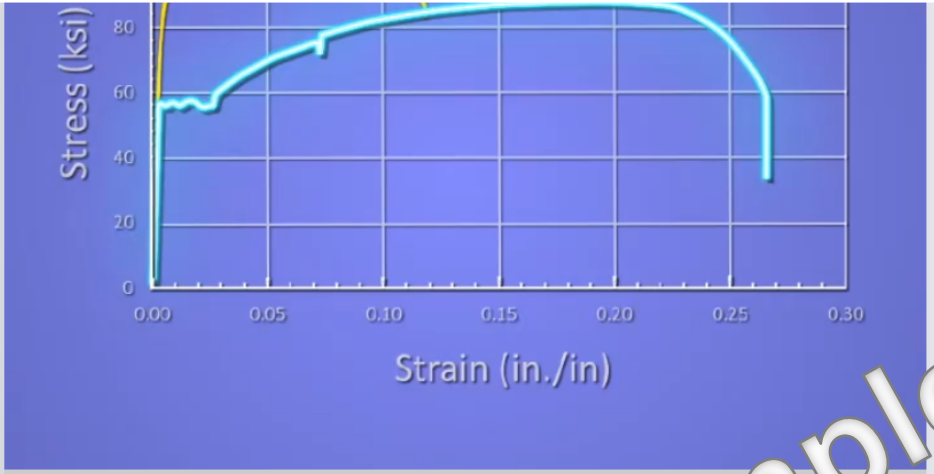

BIOMEDICAL ENGINEERING


MATERIALS ENGINEERING


AERONAUTICAL ENGINEERING

Features of JoVE

- PDF text files can be downloaded
- The video may be embedded on a website
- Video can be shared through Facebook, Twitter and Linkedin
- Text can be translated to: Chinese, French, German, Japanese, and Spanish



chromium, manganese, and nickel.

Variations in the composition and processing methods can tailor its properties for construction of cars, bridges, and skyscrapers, to name only a few of the nearly infinite possible uses.

Understanding steel's respo[illegible]to load is important when designing safe

DOWNLOAD PDF | ADD TO FAVORITES | EMBED | SHARE

TRANSLATE TEXT TO:
Choose Language...
中文 (Chinese)
français (French)
Deutsch (German)
日本語 (Japanese)
español (Spanish)

Material Constants
PREVIOUS VIDEO

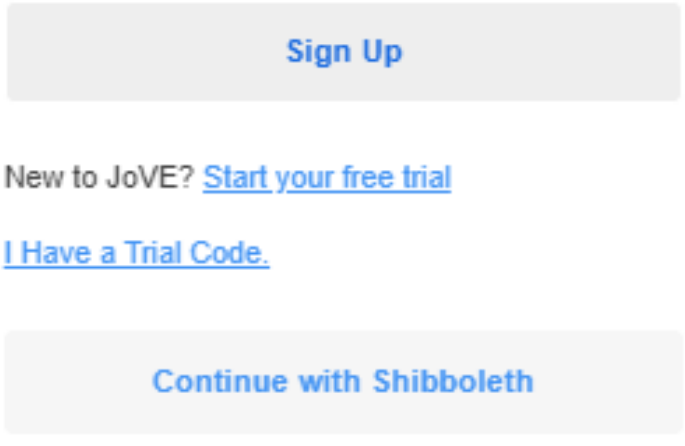
Stress-Strain Characteristics of Aluminum
NEXT VIDEO

OVERVIEW

Source: Roberto Leon, Department of Civil and Environmental Engineering, Virginia Tech, Blacksburg, VA

Accessing JoVE

- Visit https://www.jove.com/
- Click LOG IN (top right corner)
- Choose Continue with Shibboleth



Accessing JoVE

- Select Iowa State University as the institution
- Choose Okta to sign
- Login with ISU Net-IDClick Science Education at the top right corner for accessing video demonstration
  - Select Engineering
  - Select your discipline
- Link to a short video showing the login steps

MERLOT

- Access is free, but need to setup a user ID
- Includes discipline-specific learning materials and learning exercises
- Integrates a variety of material types: Animation, assessment tool, case study, presentations etc.
- Project began in 1997; Originally developed by California State Uni. Center for distributed learning
- Modelled after the NSF funded project, "Authoring Tools and An Educational Object Economy (EOE)

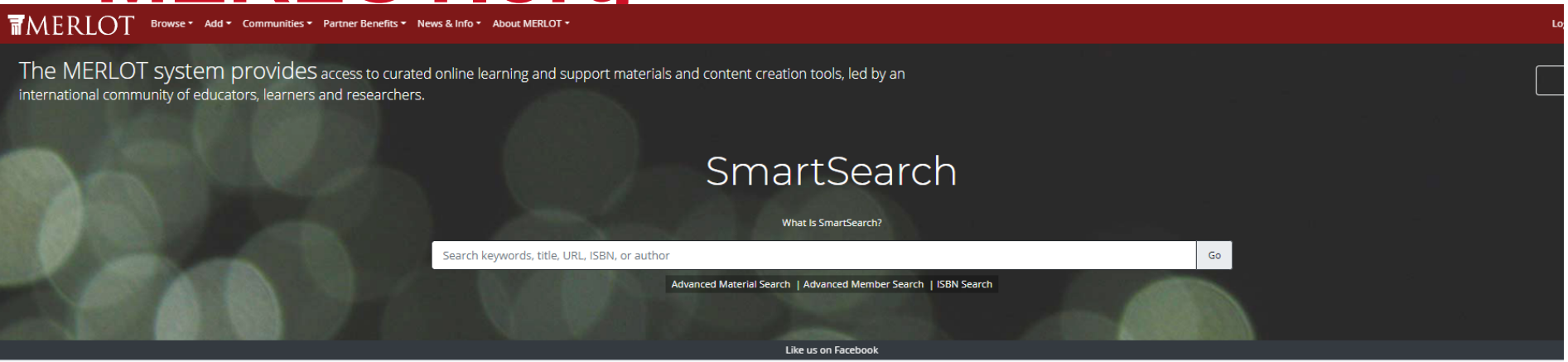
DICIPLINE-SPECIFIC MATERIALS (Quantities)

- Aerospace and Aeronautical Engineering (273)
- Agricultural and Biological Engineering (57)
- Audio Engineering (5)
- Biomedical Engineering (61)
- Chemical Engineering (216)
- Civil Engineering (609)
- Computer Engineering (195)
- Electrical Engineering (1084)
- Engineering Science (25)

DICIPLINE-SPECIFIC MATERIALS (Quantities)

- Environmental Engineering (159)
- Geological Engineering (254)
- Industrial and Systems (120)
- Manufacturing Engineering (97)
- Materials Science and Engineering (375)
- Mechanical Engineering (864)
- Mining Engineering (5)
- Nuclear Engineering (67)
- Ocean Engineering (14)
- Petroleum Engineering (20)

MERLOT.org



MERLOT Collection

Browse by Discipline

All Disciplines

Add a Material

Submit an online learning material you've found or created to the MERLOT Collection.

Create a Material

Use Content Builder to create a webpage or site to host your own learning materials.

Create a Course ePortfolio

Build your entire course – from prerequisites to online resources to assessment.