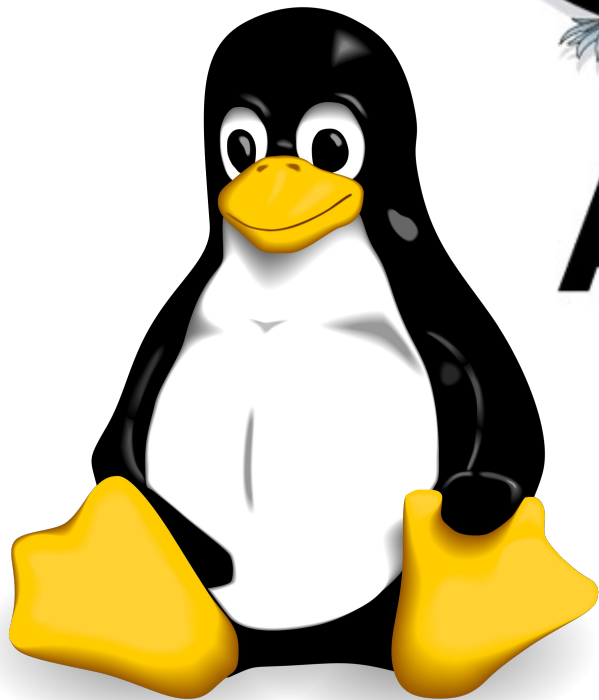


CS 418/518  
Web Programming  
Fall 2017

Dr. Justin F. Brunelle  
jbrunelle@cs.odu.edu  
<http://www.cs.odu.edu/~jbrunelle/cs518>

# Course Concepts

- LAMP Architecture
- Web Architecture
- Web Standards



**Apache**

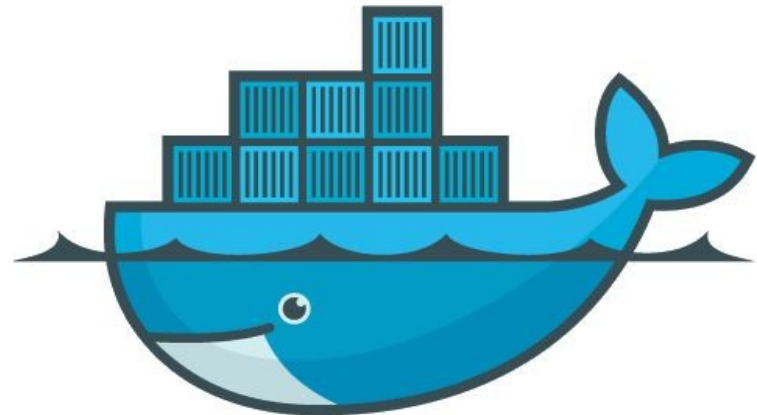


**MySQL**®



# Course Content

- LAMP: Linux, Apache, MySQL, PHP
- GitHub
- jQuery
- Docker



docker

# Why LAMP?

- Standard, well documented stack
- Teaches web design fundamentals
- Open Source
- Why not Node.js/METEOR/MEAN/whatever?
  - Fewer “standard” tutorials and examples
  - Recently popular technologies, but do not exemplify standard web design principles
  - LAMP principles translate natively to these technologies

## LAMP:



# Why GitHub?

- Industry standard
- Public!
- Accountability
- Branching/rollback/repository/tracing

**GitHub**



# Why jQuery?

- Adding client-side development to LAMP
- Standard library
- Widely adopted



# Why Docker?

- Emerging industry practice
- Principles translate to other services
- Re-usability
- Consistency



# Administrative Notes

- Room (Dragas 1117)
- Meeting times (4:20-7:00)
- *No Exams*
- Demos and projects
- Simulates long-term, professional development environment



# Course Resources

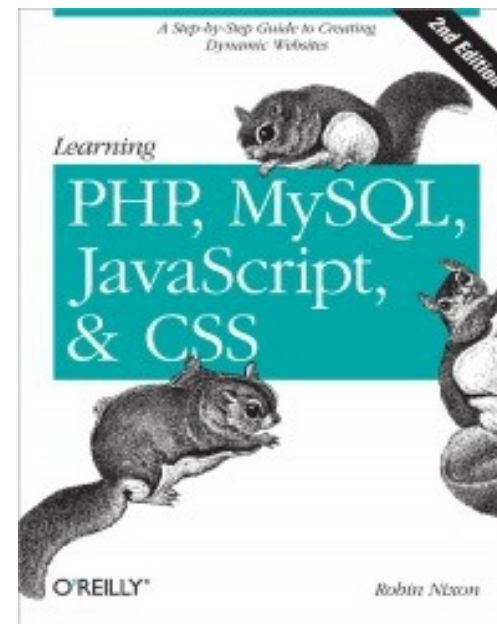
- <http://www.cs.odu.edu/~jbrunelle/cs518>
- Syllabus
  - You are responsible for knowing all policies in the syllabus
- Readings
  - Listed under the day they are expected to be completed.
- Lecture Notes and Assignments
  - Posted on schedule page before class

# Additional Resources

- W3C
- Stack Overflow
- Waterloo Course Website:  
<https://opencs.uwaterloo.ca/web-basics/>  
<https://opencs.uwaterloo.ca/web-programming/>

# Optional: Textbooks

- Beginning PHP5, Apache and MySQL Web
- PHP, MySQL, & JavaScript
  - Free access on campus:  
<http://proquest.safaribooksonline.com/book/databases/mysql/9780596803605>



# Development

- Course prerequisite: CS330 – OOP and Design
- Assuming basic HTML and CSS experience
- Course development done in LAMP
- Git for source control (<https://try.github.io>)
- Docker for deployment & grading

# Course Projects

- Single project: Stack Overflow
  - Long-term development
- 4 “releases”
- Intra-group or individual **only**
  - Collaboration via class mailing list and slack *only*

# Grading

- *Dockerized* development
  - No magic laptops!
- Submissions via GitHub
  - Used for demos and grading
  - Creates a public portfolio
- Feedback/grading sent via email

# Grading

- 4 releases, 25 points each
  - 15 points – Functional requirements
  - 3 points – project write-up
  - 3 points – website usability
  - 2 points – aesthetics
  - 2 points – status report
- Extra credit
  - Additional features
  - 0-10 extra points pending quality

# Class Policies

- Follow academic integrity policies
- Attendance is not required
  - But you are responsible for material covered in class
  - Attendance required on demo days
- Seeking help
  - Mailing list and slack *only*
  - ***All unapproved collaboration considered an honor code violation!!***
- Office hours: Friday afternoons
  - Please email me to make an appointment



# How to cheat

- Cheating results in a score of 0/25 for your milestone
- Inter-group collaboration
- Sharing code
- Passing off open source code as your own
- Failing to cite your code “inspiration”

# Dr. Justin F. Brunelle

- BS, MS, PhD in CS from ODU
- Advisor: Dr. Michael L. Nelson
  - s/VT/ODU/  
s/Electronic Music/.\*/
  - Ford muscle cars
- Digital preservation research @ ODU
  - Web Crawling, JavaScript, Web Architecture
- Lead Researcher @ MITRE
  - Helping government adopt emerging tech
  - Specialize in technology forecasting & cloud computing

