

# Exam Review

## lesson #final

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## Agenda

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The final exam from last term was previously posted in the "content" area on D2L, as an example for you.

1. [Final Exam Essentials](#)
2. [Material Review](#)

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## FINAL EXAM ESSENTIALS

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- Date? Thurs Apr 16
- When? 13:00 - 15:00
- Where? NE1-239/242
- How Long? Two hours
- How long minimum? 60 minutes
- Aids: None

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## Stress Points

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- You do not have to pass the final exam to pass the course.
- You do not have to pass the aggregate of the midterm and the final exam to pass the course.
- There are no makeup provisions should you have a bad or failing grade in the course.

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## What Will the Exam Cover?

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- |                          |                     |
|--------------------------|---------------------|
| • MVC frameworks ... 20% | • XML ... 20%       |
| • CodeIgniter ... 10%    | • DTDs ... 10%      |
| • Controllers ... 10%    | • SimpleXML ... 10% |
| • Models ... 10%         | • RBAC ... 10%      |
| • Views ... 10%          |                     |

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## What Format Will the Exam Have?

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- Multiple choice @1 ... 40-60
- Completion @2 ... 5-10
- Short answer @ 3 ... 5-10
- 100 marks in total

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## MATERIAL REVIEW

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This exam review uses the same format as that for the midterm: a mental organizer for the important material.

For any given topic, the organizer consists of a practical explanation/definition of the topic, followed by the key concepts and then the key techniques relevant to that topic.

The final exam is comprehensive, i.e addressing all of the material covered in the course. In the case of topics addressed on the midterm, the areas that will be emphasized on the final exam are shown italicized.

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# MVC Frameworks

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*Structured webapps*

## Concepts:

- MVC separation
- Design patterns
- *Loading classes*
- *Routing requests*

## Techniques:

- Classes
- Helpers
- Htaccess, virtual hosting
- *Cross-platform!*
- *Github*

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# CodeIgniter Framework

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*One PHP MVC framework*

## Concepts:

- Lightweight
- *Controllers, models, views*
- *Libraries, helpers*
- Core, hooks, routes

## Techniques:

- Discipline
- *Sessions, Authentication*
- View templates

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# CodeIgniter Controllers

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*HTTP Request handlers*

## Concepts:

- *Usecase handler*
- Utility
- Service

## Techniques:

- Routing
- Base controller
- Use other CI components

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# CodeIgniter Models

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*Data resource wrappers*

## Concepts:

- *Data resource encapsulation*
- Patterned after Active Record?
- Assumes RDB

## Techniques:

- Base model with CRUD
- *Usecase-specific methods to retrieve data*
- Entity models??

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# XML

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*Rich data structure/model*

## Concepts:

- Value, attributes & child elements
- Structured as a tree
- Marked up text
- Cross platform

## Techniques:

- Syntax
- Checking & validation
- Design: elements vs attributes
- State representation

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## DTDs

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*XML document constraints*

**Concepts:**

- XML structure
- XML element & attribute constraints
- Templates

**Techniques:**

- DTD files
- Binding XML to one
- Validation

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## SimpleXML

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*XML DOM Processing*

**Concepts:**

- Elements vs nodes
- Traversal
- Terminology
- W3C DOM

**Techniques:**

- DOM processing
- SimpleXML resource wrapper
- PHPDOM
- Treating as an object
- Treating as an array
- Iterable

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## RBAC

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*Role-based access control*

**Concepts:**

- Authentication
- Authorization
- Trust & syndicate

**Techniques:**

- Programmatic vs declarative
- Users, roles - stored in session
- Base controller vs hook
- 3rd party – Oauth, OpenID

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## Congratulations!

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You have completed lesson #final: Exam Review

If you would take a minute to [provide some feedback](#), we would appreciate it!

The next activity in sequence is: [lesson11](#) Crystal Ball

You can use your browser's back button to return to the page you were on before starting this activity, or you can jump directly to the course [homepage](#), [organizer](#), or [reference](#) page.