

## Biology 284a Patterns in Life's Diversity

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## 2009 Tutorial Timetable

There are **6 sections & 5 sessions**

<https://studentservices.uwo.ca/secure/Timetables/mastertt/ttindex.cfm>

<b>2</b>	Tu 9:30 -11:30 am	B&G 0153
<b>3</b>	Tu 1:30 - 3:30 pm	Chem 09
<b>4</b>	Tu 3:30 - 5:30 pm	B&G 0156
<b>5</b>	Th 3:30 - 5:30 pm	Kresge 103
<b>6</b>	W 3:30 - 5:30 pm	Middl. 06

**Tutorials begin 22 September**

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## Biology 284a: Course Resources

The *only required* book is:

### Lecture Notes for Biology 284a *Patterns in Life's Diversity*

Available in the bookstore, @ ~ \$13.00  
**buy a voucher if out of stock; 24 h. copy**

Lectures follow chapters closely;  
*lectures discuss, & illustrate the text*

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## Useful *supplementary* books: (*not required; just useful*)

- Margulis & Schwartz**  
- **Five Kingdoms**  
- (QH83.M36 1988)
- 2a. Cox & Moore - Biogeography**  
- (QH84.C65 1993)
- 2b. Mielke - Patterns of Life**  
- (QH84.M54 1989)

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## Video Materials

**Library videos** (QH315.3.VC) - on 5 kingdoms

### Course VHS videos:

- 1. Life on Earth** - organismal diversity  
(~4hrs)
  - 2. The Living Planet** - ecosystem diversity  
(12x1hr)
- these are available from me -  
Collip Rm. 111

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## Web Resources

### Main page:

<http://instruct.uwo.ca/biology/284>

- Course content, structure & resources
- Course Overview
- Link to lecture presentations
- Links to useful web sites

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## ***Lecture Presentations***

- *list of the lecture topics, often with links to appropriate web resources*
- *link to .html & .pdf versions of the lectures; getting there requires a login (bio284) & password (copyright)*

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## ***Credit in this Course***

**Mid-term : 40%; Final : 60%**

*Mid-term materials include :*

**284a Course Lecture Notes:  
Introduction through Chap. 7  
+ Tutorials # 1 & 2**

The **final** is *cumulative*, though the ***emphasis*** will be on the materials that follow the mid-term.

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**In 2009, the mid-term is set for  
8.30-12.30, Saturday 7 November  
HSB 236 & 240 (*here*)**

This & Final will be a Markex exams:  
a mix of T/F and multiple-choice Qs.

*If you think you will have a **conflict**,  
check with the Dean's Office to see if  
it counts and then **LET ME KNOW**  
**in good time***

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## **-why this course?**

- *increasing specialization*
- *increasingly technological approach*
- *but all Qs depend on the **organisms***
- *importance of diversity in itself*
- *and the patterns it displays*
- ***nature of our task***

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To clarify your responsibilities in the course,  
recall its goals:

- **to introduce the range of earth's organisms & their ways of living,**
- **their history, phyletic relationships & classification,**
- **their interactions & associations,**
- **the history & ecology of their patterns of distribution & adaptation.**

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## **a look at the course book...**

- **the Epigraph**  
the closing passage of Darwin's "Origin"
- **the Overture**  
the power of the evolutionary model to explain our patterns
- **the Preamble**  
a framework for getting to grips with diversity

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## aspects of diversity

### 1. The organismal dimension - what has evolution produced?

- *What sorts of organisms?*
- *What do they look like?*
- *How do they function?*
- *How many are there?*

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## aspects of diversity

### 2. The taxonomic dimension - how has this happened?

- *How are organisms related?*
- *How should we classify them?*

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## aspects of diversity

### 3. The historical dimension - how has life changed in time?

- *Patterns of extinction*
  - *Patterns of diversification*
  - *Their interactions*
- ➡ **biotic turnover**

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## aspects of diversity

### 4. The spatial dimension - how is life arrayed in space?

- *Where are the different lineages?*
- *Where is most diversity found?*
- *How have organisms adapted?*
- *Resulting patterns?*

**BIOGEOGRAPHY**

**BIOMES**

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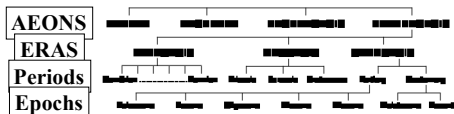
## TIME, SPACE & SCALE

Orders of magnitude; powers of 10

SIZE : bacteria  $10^{-7}$ m.; fungus  $10^3$ m.

TIME : life is  $\sim 3.9 \times 10^9$  years old

### *Use of time charts - exams*



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NB: in text, one Time Chart is out of sequence 17

## NEXT CLASS

Species, resemblance and  
classification

***take a look at Overview:***

<http://instruct.uwo.ca/biology/284/intro.html>

(linked from main course webpage)

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