**MOLECULAR BIOLOGY 2012**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Order** | **Date(m/d)** | **Topic** | **Chapter** |  |
| **1** | **9/20** | **Genes are DNA** | **1** |  |
| **2** | **9/27** | **The interrupted gene** | **4** |  |
| **3** | **10/4** | **The content of the genome** | **5** |  |
| **4** | **10/11** | **DNA replication** | **14** |  |
| **5** | **10/18** | **Prokaryotic Transcription** | **19** |  |
| **6** | **10/20** | **Transposable elements and retroviruses** | **17** |  |
| **7** | **11/1** | **Eukaryotic transcription** | **20** |  |
| **8** | **11/8** | **Midterm-exam (range 1-7)** |  |  |
| **9** | **11/15** | **RNA splicing and processing** | **21** |  |
| **10** | **11/22** | **mRNA stability and localization** | **22** |  |
| **11** | **11/29** | **The operon** | **26** |  |
| **12** | **12/6** | **Eukaryotic transcription regulation** | **28** |  |
| **13** | **12/13** | **Translation** | **24,25** |  |
| **14** | **12/20** | **Epigenetic effects are inherited** | **29** |  |
| **15** | **12/27** | **Regulatory RNA** | **30** |  |
| **16** | **1/3** | **Presentation** |  |  |
| **17** | **1/10** | **Presentation** |  |  |
| **18** | **1/17** | **Final exam (range 9-15)** |  |  |

**Grading policy:**

**midterm exam 45%**

**final exam 45%**

**student presentation 10%**

**Textbook: Gene X. Benjamin Lewin. 2010. Oxford University Press**

**Molecular Biology 2012**

**Department of Medical Laboratory Science and Biotechnology, NCKU**

**Course coordinator: KC Young, Room 5794; Tel: (06)-2353535 ext. 5787**

**PS Chen, Room xxxx ; Tel: (06)-2353535 ext. xxxx**

**Time: Thur. 10:10-12:00 Place: 5776 room**

Description: The course introduces the fundamental structure of genes and the molecular mechanisms in regulation of genetic materials, including DNA and RNA. The course encompasses three parts: (1) the sequence of the human and other genomes and also with complete coverage of recent advances in gene structure and genomics; (2) the function and regulation of gene, including replication, transposon, transcription and splicing; (3) special topics involving epigenetic effects and molecular tools for studying genes.

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| --- | --- | --- | --- | --- |
| **Class** | **date(m/d)** | **Topic** | **Chapter** | **Instructor** |
| **1** | **9/20** | **Genes are DNA** | **1** | **PS Chen** |
| **2** | **9/27** | **The interrupted gene** | **4** | **PS Chen** |
| **3** | **10/4** | **The content of the genome** | **5** | **PS Chen** |
| **4** | **10/11** | **DNA replication** | **14** | **KC Young** |
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| **8** | **11/8** | **Midterm-exam (range 1-7)** |  | **KC Young** |
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