

**RIVERS AND DRAINAGE BASINS**  
**GEOL 315, GEOL 500, EVPP 505 - FALL 2005**  
**GEORGE MASON UNIVERSITY**

**Mondays & Wednesdays 6-7:15 pm**

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| <u>Date</u> | <u>Topic</u>                                    | <u>Readings</u>   |
|-------------|---|-------------------|
| Aug 29      | introduction                                    |                   |
| 31          | drainage basins                                 | RKM ch 5          |
| Sep 5       | no class  |                   |
| 7           | drainage basins                                 |                   |
| 12          | fluvial processes                               | RKM ch 6          |
| 14          | fluvial landforms                               | RKM ch 7          |
| 19          | physiography of North America                   | Hunt ch 1         |
| 21          | no class  |                   |
| 26          | <b>the Chesapeake watershed</b> , Potomac basin |                   |
| 28          | Potomac basin                                   |                   |
| Oct 3       | * The Susquehanna basin                         |                   |
| 5           | * The Rappahannock basin                        | exam to take home |
| 10          | no class  |                   |
| 11          | * The Kennebec-Androscoggin basin               |                   |
| 12          | Potomac ecology (Dr. Kelso)                     |                   |
| 17          | no class  |                   |
| 18          | * the Hudson-Mohawk basin                       |                   |
| 24          | <b>the Mississippi basin</b> , physiography     |                   |
| 26          | * the upper Mississippi                         |                   |
| 31          | * the Missouri                                  |                   |
| Nov 2       | * the Ohio                                      |                   |

|     |     |  |                     |
|-----|-----|--|---------------------|
| Nov | 4-6 | Potomac basin field trip (dates tentative) |                     |
|     | 7   | * the Tennessee                            |                     |
|     | 9   | * the lower Mississippi                    |                     |
|     | 14  | * the Rio Grande-Pecos basin               |                     |
|     | 16  | river and floodplain restoration, Dr. Ahn  |                     |
|     | 21  | <b>the Colorado basin</b> , physiography   |                     |
|     | 23  | no class                                   |                     |
|     | 28  | *the upper Colorado                        |                     |
|     | 30  | * the lower Colorado                       |                     |
| Dec | 5   | * the Sacramento-San Joaquin basin         |                     |
|     | 7   | * the Columbia-Snake basin                 | exam 2 to take home |

\* student presentations

Students will be responsible for compiling information on a drainage basin and presenting it to the class on the assigned day. Students will be expected to monitor stream flows in their drainage basin over the course of the semester. Term paper on assigned drainage basin due 7 December. Term paper will be 15-20 double spaced pages, not including figures, tables, references. Formats for presentation and term paper will be provided.

Students will be responsible for monitoring stream flow at one gauging station in the Potomac basin over the course of the semester. We will visit several of these gauging stations on the field trip.

|          |               |           |
|----------|---------------|-----------|
| Grading: | Exam 1        | 25 points |
|          | Exam 2        | 25 points |
|          | Presentation  | 20 points |
|          | Paper         | 20 points |
|          | Participation | 10 points |

Important websites

<http://water.usgs.gov>

<http://nationalatlas.gov>

Readings & references:

Hunt, C.B., 1974, *Natural Regions of the United States and Canada*: W.H. Freeman & Co. Publ

Ritter, Kochel & Miller, 2002, *Process Geomorphology*, Wm. C. Brown Publ.