

Meetings: Class = Tuesday afternoons 1:00 – 5:00 p.m. (most will be field trips)
Common Hour (Env. Res College) = Thursday Evenings 7:00 – 8:30 p.m.

Textbooks: Stranahan, S., 1992 Susquehanna: River of Dreams
Brubaker, J. 2002 Down the Susquehanna to the Chesapeake
Swimme, B., and Berry, T., 1992, The Universe Story

Grading: Class attendance and participation (required) 20 %
- participation in field trips
- occasional readings from journal entries
- active discussion
- discussion of readings
Weekly Journals 20%
- collection of journals weekly for review
- comments, notes, prose, research
Writing assignments 25%
- periodic writing assignments – some collected and revised
- some for peer review
- weekly questions from the readings for discussion (groups) *
Weekly images and web links 10%
- weekly image with your commentary e-mailed to me
- weekly link to a new site related to the Susquehanna or issues discussed in class
- (both will be compiled on to the class web site)
Project 25%
- group projects to be arranged * (groups of 2)

Initial meeting – Saturday August 21
Advising appointments – Monday Aug 23

Course concepts

Syllabus

Expectations

Field Trips

Introductions

Weekly Journal

- partial reading twice

Weekly Submissions

- images and comments

- website links

Susquehanna River Watershed

Assignment #1 – Susquehanna image and comment for website

Tentative Tuesday Afternoon Schedule

<u>DATE</u>	<u>ACTIVITIES/TRIPS</u>	<u>ASSIGNMENTS</u>
Aug. 31	Appalachian History and River Development FIELD TRIP – 1) Millersburg cut 2) Liverpool gaps 3) Shikellamy Park Overlook	#2 Susquehanna Reflections
Sept. 7	Watersheds and Forests FIELD TRIP -- Tall Timbers Old Growth Forest - watershed processes, land use impacts, forest management	#3 Old Growth & Forest Management
Sept. 14	Projects and Research Tools INSIDE 1) Seminar room discussion 2) Library 3) Computer lab	
Sept. 21	Lumber Industry and/or Native American Peoples of the Susquehanna FIELD TRIP – Lycoming County Museum ? - Hiawatha ? Wpt. Overlook, Gap, Blockfield, Allenwood till	
Sept. 28	Buffalo Creek Watershed FIELD TRIP – Stream Survey at Cowan, Tour of watershed gages	#4 Buffalo Creek poem
Oct. 5	Riverine Wetlands – Montandon Marsh FIELD TRIP – Montandon Wetlands, Groundwater, Alluvial aquifer Aggregate Resources and Impact, Reclamation	#5 Growth and Conservation
Oct. 12	Autumn Forest Photography Workshop (grab a camera) North Branch Buffalo Creek, Hook Natural Area Assgn #6: Posters or WebSites of your images & thoughts next week	
Oct. 19	Karst and Limestone Problems - Nippenose Valley FIELD TRIP – sinkholes, contamination problems	
Oct. 26	FALL BREAK – NO CLASS	
Nov. 2	Agriculture and Impacts on the Land and Water – Management FIELD TRIP – 1) Dairy Farm (traditional) 2) Organic Farm	#7 Ag Philos.
Nov. 9	Mineral Resources – Anthracite Coal and Its Legacy in Pennsylvania FIELD TRIP – 1) Ashland Deep Mine 2) Centralia	
Nov. 16	Lower Gorge of the Susquehanna – Catastrophic Paleofloods and Eagles EXTENDED FIELD TRIP (12-??) – Holtwood Gorge – paleoflood site and island Ecology; Conowingo Hydroelectric Dam, MD and Bald Eagles	
Nov. 23	Coal Legacy Part 2 and Appalachian Structure FIELD TRIP – 1) Bear Valley strip mine 2) Bear Valley AMD - impacts on landscape and water, reclamation & treatments	#8 Coal Legacy
Nov. 30	Discussion – “The Universe Story” INSIDE -- clips from “Canticles on the Cosmos”, religion and ecology	
Dec. 7	Post Paul Winter Discussion & The Universe Story Discussion INSIDE	PROJECT PRESENTATIONS

Special Weekend Events/Trips:

Saturday-Sunday, September 18-19 – Susquehanna River Canoe adventure
 Overnight retreat at Cowan
 Saturday-October 30 – Hawk Mountain Sanctuary
 With stop on return trip at Centralia coal mine fire

Field Trips: (you must fill out the field trip forms)

Please bring a clipboard, (8 1/2 x 11 preferred), pencils, colored pencils, eraser, paper. Bring your journals or field notebooks. Be prepared to walk through brush, over loose rock in quarries, and to be out in all kinds of weather. You should wear hiking boots or sturdy sneakers that can get dirty. Long pants might be useful to reduce bug bites and scratches.

Anticipate weather changes by dressing in layered fashion – **always** have a jacket along and bring hats and rain gear!!! **Things can change very rapidly!!**
 It is advisable to bring water, especially when it is warm. Bring a day pack to carry your items. If you have necessary medication, please bring it.

Reading Assignments from Your Texts

(additional readings may be assigned during the semester)

Note: Please begin reading “The Universe Story” and have it completed by the end of Fall Break – you may need to re-read it before the discussion toward semester’s end.
 Please read Brubaker casually throughout the semester, focusing on selected reaches as they are assigned.

Week of:	Topic	Text Readings (S, B, S-B) **
Aug. 31	Appalachian Geology, River Origin	S (p.1-37) B (p. 130-135; p. 119-142)
Sept. 7	Watersheds and Forests	S (p.38-73 and skim p. 74-115)
Sept. 14	Projects and Tools	continue with B and S-B general
Sept. 21	Native Peoples and Lumbering	S (p.74-115) B (p.107-119) & TBA
Sept. 28	Buffalo Creek	TBA
Oct. 5	Riparian Wetlands	TBA
Oct. 12	Photography	TBA
Oct. 19	Karst – Nippenose Valley	TBA
Oct. 26	Fall Break	
Nov. 2	Agriculture	S (p.214-241)
Nov. 9	Coal and Mineral Resources	S (p. 144-181) B (p.50-59)
Nov. 16	Lower Gorge and Power Generation	S (p.182-213) B (p.192-225) (161-191)
Nov. 23	Coal Legacy	TBA
Nov. 30	The Universe Story	S-B “The Universe Story”
Dec. 7	The Universe Story, Paul Winter	S-B “The Universe Story”

** S = Stranahan B = Brubaker S-B = Swimme and Berry

Comments about the Susquehanna Course:

Susquehanna focuses on natural history (ecology, geology, cultural, quality, and land-use issues) of the primary watershed of the largest estuary in North America – the Chesapeake Bay. My hope is that you will come away with the importance of a sense of place, an understanding of how a watershed system works, and an awareness of the complex intersections between natural systems and human land use. We will examine the evolution of the river, starting from its geological roots millions of years ago following the upheaval of the Appalachian Mountains when the African plate collided with North America. Watershed processes will be studied to learn connections between hillslopes and stream channels, how water and sediment moves, and the role of the notorious floods in shaping Susquehanna landscapes.

We will see how geology shaped not only the topography, but also the destiny of its resources, settlements, and cultural history, including economic development and utilization of basin resources such as mineral, timber, water supply, power, and agriculture. The watershed has been home for native peoples for thousands of years prior to settlement, and to forests and animals for millions of years. We will investigate lifeways and a rich cultural history of native Susquehanna peoples, ancient but continuing bird migratory routes, the awe of old growth forests nearby, our disappearing wetlands environments along the river, and will examine issues such as the sacredness of space.

Finally, we will extend our studies of geology, ecology, economics, and culture to explore connections to larger environmental issues by examining a concept known as ‘the watershed within’. With the Susquehanna as a focus, we will see how a river may represent the confluence of passions, ideals, needs, rights of individuals as well as rights of non-human inhabitants of a watershed. Discussions will wrestle with issues such as watershed and land-use ethics, pollution, and process linkages between upstream and downstream regions. To facilitate thinking about this broader context, I’ve included a book called ‘The Universe Story’ by Brian Swimme and Thomas Berry. Swimme is a cosmologist/astronomer/mathematician and leads the Center for Integral Studies in California. Berry is a geologist – a priest, monk, and an educator who pioneered the global movement on Religion and Ecology. This book tries to convey a message that the universe, and our part in it, is part of a story – our story. The hope is to help gain a better understanding of our place in the universe and improve our understanding of our true connection to nature. I hope that between our experiences with the Susquehanna and these larger issues, you will not only see how fortunate we are to be in the Susquehanna Bioregion, and how magical it truly is, but that you will come away with a deepened sense of respect and connection between you and the natural world. For this, I truly believe is the one hope we have of survival in a sustainable world.

