MAN IN SPACE

npsy 120B

Required Text: Space Physiology, J. Buckey
Reading Order:
Chapter 3, 1, 4, 7, 8, 5, 6, 9, 11, 2, 10, 12

Suggested fun reading:
PACKING FOR MARS
Mary Roach

Recommended for history of powered flight:
THE WRIGHT BROTHERS
David McCullough

The following books are highly recommended.

KABLOONA
G. De Poncins

SURVIVING THE EXTREMES
K. Kamler

LIFE AT THE EXTREMES
F. Ashcroft

GLIMPSES OF CREATURES IN THEIR PHYSICAL WORLDS
S. Vogel

THE SPARK OF LIFE: DARWIN AND THE PRIMEVAL SOUP
C. Willis, J. Bada

RARE EARTH: WHY COMPLEX LIFE IS UNCOMMON IN THE UNIVERSE
P.D. Ward, D. Brownlee

DRAGONFLY: NASA AND THE CRISIS ABOARD MIR
B. Burrough

CANNIBALISM
B. Schutt

Success in this four-credit course is based on the expectation that students will spend a minimum of 12 hours of study time per week in preparation for class (readings, papers, preparation for exams).***
September 4  Introduction  
Read articles posted on Latte:  
Wigner1960  
The Simplest Satellite That opened up the Universe

September 18  Read Article posted on Latte:  
Acceleration, Gravity, and Weightlessness

September 25  Space Physiology, Chapters 1 and 3

October 2  Space Physiology, Chapter 4  
Read Articles posted on Latte:  
What Happens to your Brain on the Way to Mars  
Predications of Space Radiation Fatality Risk for Exploration

October 9  Space Physiology, Chapter 7  
Read Articles posted on Latte:  
Structural Support for Damaged Tissue Repair

October 16  Space Physiology, Chapter 8

October 23  MIDTERM QUIZ  
Space Physiology, Chapters 5 and 6

October 30  Space Physiology, Chapters 10 and 12  
Read Articles posted on Latte:  
Proprioceptive signals contribute to the sense of body ownership  
Cerebellar contribution to visuo-attentional alpha rhythm

November 6  Lab Tour

November 13  Read Articles posted on Latte:  
Space Motion Sickness  
Sleep, Workload and Boredom  
Disrupted Sleep from Molecules to Cognition  
NASA Sleep Environment Recommendations for Future Spaceflight

November 20  Read Articles posted on Latte:  
Mechanisms of Human Static Spatial Orientation  
Influence of GIF on subjective vertical  
Angular Displacement

November 27  Read Articles posted on Latte:  
Human Orientation and Movement Control  
Adaptation to Coriolis Perturbations of Voluntary Body Sway  
The Evolutionary Advantage of Burrowing Underground

December 4  Student Presentations

December 11  Student Presentations