General Education Review Committee
Agenda

12:30-1:30
January 21, 2011
ADM 204

I. Call to Order
Roll

( ) Suzanne Forster	UAB/CAS	Humanities
( ) Sue Fallon	UAB/CHSW	Social Sciences
( ) Utpal Dutta	UAB/SOE	
( ) Kevin Keating	UAB/Library	
( ) Deborah Fox	UAB/Mat-Su	Written Communication
( ) Len Smiley	CAS	Quantitative Skills
( ) Shawnalee Whitney	CAS	Oral Communication
( ) Walter Olivares	CAS	Fine Arts
( ) Beverly Barker	CAS	Natural and Physical Sciences
( ) Robert Capuozzo	COE	
( ) Sandra Pence	CTC	
( ) Kyle Hampton	CBPP	Social Sciences
( ) Hilary Davies	UAB	Ex officio/UAB Chair
( ) Bart Quimby	UAB	Ex officio/OAA
( ) Vacant	Student	

II. Approval of Agenda (pg. 1)

III. Approval of Summary (pg. 2)

IV. Report from Associate Vice Provost Bart Quimby

V. Chair's Report

VI. Course Action Requests

Chg PSY A370 Behavioral Neuroscience (3 cr) (3+0) (pg. 3-8)

Chg ENGL A311 Advanced Composition (3 cr) (3+0) (pg. 9-17)

Chg PHYS A123L Basic Physics I Laboratory (1 cr) (0+3) (pg. 18-22)

Chg PHYS A124L Basic Physics II Laboratory (1 cr) (0+3) (pg. 23-27)

Chg PHYS A211L General Physics I Laboratory (1 cr) (0+3) (pg. 28-32)

Chg PHYS A212L General Physics II Laboratory (1 cr) (0+3) (pg. 33-37)

Chg STAT A307 Probability and Statistics in Science (4 cr) (4+0) (pg. 38-42)

VII. Old Business
A. Discussion of Terry Rhodes presentation to GERC

B. GERC outcomes mapping

VIII. New Business
A. Assessment Committee response

IX. Informational Items and Adjournment

General Education Review Committee
Summary

12:30-1:30
January 14, 2011
ADM 204

I. Call to Order
Roll

(e) Suzanne Forster	UAB/CAS	Humanities
(x) Sue Fallon	UAB/CHSW	Social Sciences
(x) Utpal Dutta	UAB/SOE	
(e) Kevin Keating	UAB/Library	
(x) Deborah Fox	UAB/Mat-Su	Written Communication
(x) Len Smiley	CAS	Quantitative Skills
(x) Shawnalee Whitney	CAS	Oral Communication
( ) Walter Olivares	CAS	Fine Arts
(x) Beverly Barker	CAS	Natural and Physical Sciences
(x) Robert Capuozzo	COE	
(x) Sandra Pence	CTC	
(e) Kyle Hampton	CBPP	Social Sciences
(x) Hilary Davies	UAB	Ex officio/UAB Chair
(x) Bart Quimby	UAB	Ex officio/OAA
( ) Vacant	Student	

A307

II. Approval of Agenda (pg. 1)
Approved

III. Approval of Summary (pg. 2)
Approved

IV. Report from Associate Vice Provost Bart Quimby

V. Chair's Report
Suzanne Forster and Sue Fallon both attending AACU Conference

VI. Course Action Requests

Chg ENGL A311 Advanced Composition (3 cr) (3+0)
No revisions received

Chg PSY A370 Behavioral Neuroscience (3 cr) (3+0) (pg.)
1st reading, will see this course again at next GERC meeting

VII. Old Business
A. Discussion of Terry Rhodes presentation to GERC

B. GERC outcomes mapping (pg. 3-11)

VIII. New Business
A. Comments on the new Academic Assessment Handbook (pg. 12-31)

IX. Informational Items and Adjournment

Meeting adjourned

Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College	1b. Division	1c. Department
AS CAS	ASSC Division of Social Science	Psychology

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
PSY	A370	N/A	3	(3+0)

6. Complete Course Title
Behavioral Neuroscience

Abbreviated Title for Transcript (30 character)

7. Type of Course ☒ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action: ☐ Add *or* ☒ Change *or* ☐ Delete

If a change, mark appropriate boxes:

- ☐ Prefix
- ☐ Credits
- ☒ Title
- ☐ Grading Basis
- ☒ Course Description
- ☐ Test Score Prerequisites
- ☐ Other Restrictions
  - ☒ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG (please specify)
- ☐ Course Number
- ☐ Contact Hours
- ☐ Repeat Status
- ☐ Cross-Listed/Stacked
- ☒ Course Prerequisites
- ☐ Co-requisites
- ☒ Registration Restrictions

9. Repeat Status No # of Repeats Max Credits

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

11. Implementation Date semester/year
From: Fall/2011 To: 99/9999

12. ☐ Cross Listed with

☐ Stacked with

Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

Impacted Program/Course	*Catalog Page(s) Impacted*	*Date of Coordination*	*Chair/Coordinator Contacted*
1. Tier 3: Integrative Capstone	83	2/19/10	uaa-faculty listserve
2. BIOL A452	334	1/11/10	Doug Causey
3. BA & BS in Psychology; PSY A485	123; 459		

Initiator Name (typed): Gwen Lupfer-Johnson

Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 2/19/2010
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 2/19/09

14. General Education Requirement
Mark appropriate box:
☐ Oral Communication ☐ Written Communication ☐ Quantitative Skills ☐ Humanities
☐ Fine Arts ☐ Social Sciences ☐ Natural Sciences ☒ Integrative Capstone

15. Course Description *(suggested length 20 to 50 words)*
Examines how behavior and cognition are mediated by biological processes. Covers neural activity, the organization of the nervous system, psychopharmacology, and biological bases of normal and abnormal behaviors.
Special Note: Although this course is one option for a university-wide integrative capstone, it does not meet the Psychology major capstone requirement.

16a. Course Prerequisite(s) *(list prefix and number)*
Grades of C or higher in (ENGL A111), and either (PSY A111 or PSY A150), and either (BIOL A102; BIOL A111 or BIOL A115), and either (ENGL A211, ENGL A212, ENGL A213, or ENGL A214)

16b. Test Score(s)
N/A

16c. Co-requisite(s) *(concurrent enrollment required)*
N/A

16d. Other Restriction(s)
☐ College ☐ Major ☒ Class ☐ Level

16e. Registration Restriction(s) *(non-codable)*
Junior or Senior standing.

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Success in some upper-division courses in psychology hinges on mastery of material in key foundation courses (like PSY A111 or PSY A150), and basic skills in math and writing. Given the reliance on papers in this course, student success hinges on having proficiency in writing as covered in ENGL A111 and 200-level composition courses.

Initiator (faculty only) Date

Gwen Lupfer-Johnson
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved Department Chairperson Date

☐ Approved
☐ Disapproved Curriculum Committee Chairperson Date

☐ Approved
☐ Disapproved Dean/Director of School/College Date

☐ Approved
☐ Disapproved Undergraduate/Graduate Academic Board Chairperson Date

☐ Approved
☐ Disapproved Provost or Designee Date

UNIVERSITY OF ALASKA ANCHORAGE
COURSE CONTENT GUIDE

I. Initiation Date: February 2010

II. Course Information

A.	College:	College of Arts and Sciences
B.	Course Title:	Behavioral Neuroscience
C.	Course Subject/Number:	PSY A370
D.	Credit Hours:	3.0 Credits
E.	Contact Time:	Lecture hours: 3 Lab hours: 0
F.	Grading Information:	A-F
G.	Course Description:	Examines how behavior and cognition are mediated by biological processes. The course overviews neural activity, the organization of the nervous system, psychopharmacology, and biological bases of normal and abnormal behaviors. Special Note: Although this course is one option for a university-wide integrative capstone, it does not meet the Psychology major capstone requirement.
H.	Status of course relative to degree or certificate program:	Applies to the BA and BS in Psychology
I.	Lab Fees:	No
J.	Coordination:	UAA faculty list-serve
K.	Course Prerequisites:	Grades of C or higher in (ENGL A111), and either (PSY A111 or PSY A150), and either (BIOL A102; BIOL A111 or BIOL A115), and either (ENGL A211, ENGL A212, ENGL A213, or ENGL A214)
L.	Registration Restrictions:	Junior or Senior standing.

III. Course Activities

Lecture

Assignment: Essay and multiple-choice exams; written assignments; anatomical diagrams.

IV. Evaluation

Evaluation procedures are at the discretion of the instructor and will be discussed at the first class meeting of the semester. Students will be evaluated on closed-book quizzes/exams (approximately 70% of course grade), APA- or CSE-style term papers covering topics such as the ethical aspects of using non-human animals in behavioral research (approximately 20 % of course grade), and miscellaneous brief exercises (e.g., a brain lab in which structures are identified by students working in groups; approximately 10 % of course grade).

V. Course Level Justification

Before taking PSY A370 students must understand the basic principles of survey courses in both psychology and biology. Additionally, PSY A370 will explore a variety of issues that are also covered from different perspectives in other courses, making PSY A370 most appropriate for students who have amassed enough credits to be Juniors or Seniors.

VI. Outline

A. Origins of biological psychology
B. Structure and function of cells
C. Structure and function of nervous system
D. Psychopharmacology
    1. Principles of psychopharmacology
    2. Sites of drug action
    3. Neurotransmitters and neuromodulators
    4. Pharmacology of commonly abused drugs
E. Methods and strategies of research
    1. Brain lesion studies
    2. Recording and stimulating neural activity
    3. Neurochemical methods
F. Sensory systems
    1. Vision
    2. Audition and body senses
G. Sleep and biological rhythms
H. Reproductive behaviors
I. Neurological disorders
J. Ingestive behaviors
    1. Drinking
    2. Feeding
K. Learning and memory
L. Schizophrenia, anxiety, and affective disorders

VII. Instructional Goals and Defined Outcomes

Instructor goals: **The instructor will**	**Student Outcomes:** **Students will be able to**
1. Provide an overview of neural activity and the organization of the nervous system.	• Describe neural activity and the organization of the nervous system.
2. Explain the principles of psychopharmacology, including the mechanisms of action for common drugs of abuse and psychotropic medications.	• Explain the principles of psychopharmacology, including the mechanisms of action for common drugs of abuse and psychotropic medications.

3. Explain the neurobiological mechanisms to the expression of behaviors such as feeding, aggression, and reproduction.	• Describe the neurobiological mechanisms to the expression of behaviors such as feeding, aggression, and reproduction.
4. Describe the physiological basis of psychopathology.	• Describe the physiological basis of psychopathology.
5. Present the empirical basis for current developments in biological psychology by using primary sources.	• Relate quantitative results from empirical studies to brain mechanisms, behavior and cognition.
6. Discuss ethical principles relevant to conducting behavioral neuroscience research with animals and humans.	• Apply bioethics as it relates to behavioral neuroscience research.

VIII. Integrative Capstone Justification

a. Knowledge Integration

This is a core objective of the course. Findings from biology and neuroscience are related to the traditional interest areas of psychology, including learning, memory, psychopathology, drug abuse, and behavior regulation. In addition, topics from philosophy such as ethics, free will, and the mind-brain problem are frequently considered in the course.

b. Effective Communication

The course requires written assignments and essay responses to exam questions. It is expected that there will typically be four written assignments, three of which will require the analysis of a research article. Students will be expected to submit clearly written assignments in either APA or CSE format.

c. Critical Thinking

The written assignments will require the careful evaluation of empirical studies with attention to the appropriateness of the author's conclusions. An examination of the connection between neuroscience data and psychological function is central to the course. Students will be asked to identify what is and is not shown by available research.

d. Information Literacy

Students will use sources such as PsychInfo and CSA to identify recent research contributions relevant to the central topics in the course.

IX. Suggested Text(s)

Carlson, N. R. (2011). *Foundations of behavioral neuroscience* (8th ed.). Boston, MA: Allyn & Bacon.

Pinel, J. P. J. (2008). *Biopsychology* (7th ed.). Boston, MA: Allyn & Bacon.

Kalat, J. W. (2008). *Biological psychology* (10th ed.). Belmont, CA: Wadsworth.

X. Bibliography

Dawkins, R. (1993). Gaps in the mind. In *The Great Ape Project* (pp. 80-87). Paola Cavalieri & Peter Singer (eds.), London, UK: Fourth Estate.

Fouts, R. & Fouts, D. (1993). Chimpanzees' use of sign language. In *The Great Ape Project* (pp. 28-41). Paola Cavalieri & Peter Singer (eds.), London, UK: Fourth Estate.

Gazzaniga, M. S. (Ed). (2004). *The cognitive neurosciences III*. Cambridge, MA: MIT Press.

Kandel, E. R., Schwartz, J. H., Jessel, T. M. (Eds.) (2000). *Principles of neural science* (4th ed.). New York, NY: McGraw-Hill.

Miller, N. E. (1985). The value of behavioral research on animals. *American Psychologist, 40,* 423-440.

Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College	1b. Division	1c. Department
AS CAS	AHUM Division of Humanities	English

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
ENGL	A311	n/a	3 CR	(3+0)

6. Complete Course Title
Advanced Composition

Abbreviated Title for Transcript (30 character)

7. Type of Course ☒ Academic ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action: ☐ Add *or* ☒ Change *or* ☐ Delete

If a change, mark appropriate boxes:

- ☐ Prefix
- ☐ Credits
- ☐ Title
- ☐ Grading Basis
- ☒ Course Description
- ☐ Test Score Prerequisites
- ☐ Other Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☐ Course Number
- ☐ Contact Hours
- ☐ Repeat Status
- ☐ Cross-Listed/Stacked
- ☒ Course Prerequisites
- ☐ Co-requisites
- ☐ Registration Restrictions
- ☒ Other Update CCG (please specify)

9. Repeat Status No # of Repeats 0 Max Credits

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

11. Implementation Date semester/year
From: Fall/2011 To: 9999/9999

12. ☐ Cross Listed with

☐ Stacked with _____ Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three impacts, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

Impacted Program/Course	*Catalog Page(s) Impacted*	*Date of Coordination*	*Chair/Coordinator Contacted*
1. See attached			
2.			
3.			

Initiator Name (typed): Jacqueline Cason

Initiator Signed Initials: _____ Date: _____

13b. Coordination Email Date: 10/15/09
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison: Date: 1015/09

14. General Education Requirement *Mark appropriate box:*
☐ Oral Communication ☒ Written Communication ☐ Quantitative Skills ☐ Humanities
☐ Fine Arts ☐ Social Sciences ☐ Natural Sciences ☐ Integrative Capstone

15. Course Description *(suggested length 20 to 50 words)*
Advanced instruction in composing and revising, with focus on inventional strategies, and audience, persuasion, and style.

16a. Course Prerequisite(s) *(list prefix and number)*
(ENGL A211 OR ENGL A212 OR ENGL A213 OR ENGL A214) with minimum grade of C

16b. Test Score(s)
n/a

16c. Co-requisite(s) *(concurrent enrollment required)*
n/a

16d. Other Restriction(s)
☐ College ☐ Major ☐ Class ☐ Level

16e. Registration Restriction(s) *(non-codable)*
n/a

17. ☒ Mark if course has fees Technology

18. ☐ Mark if course is a selected topic course

19. Justification for Action
Updating CCG for ENGL A311 to reflect current practices. Updating course description, outline, evaluation, goals and outcomes, and bibliography.

Initiator (faculty only) Date
Jacqueline Cason
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved
Department Chairperson Date

☐ Approved
☐ Disapproved
Curriculum Committee Chairperson Date

☐ Approved
☐ Disapproved
Dean/Director of School/College Date

☐ Approved
☐ Disapproved
Undergraduate/Graduate Academic Board Chairperson Date

☐ Approved
☐ Disapproved
Provost or Designee Date

English 311

13a.

Impacted Program/Course	*Catalog Page(s) Impacted*	*Date of Coordination*	*Chair/Coordinator Contacted*
BA English	100-101	10/10/09	Judith Moore, Chair, Department of English
Minor, Professional Writing	101-102	10/10/09	Judith Moore, Chair, Department of English
Paralegal Studies	152-153 and 256	11-1-10	Andre Rosay, Director, Justice Center
Bachelor of Social Work	160	11-1-10	Beth Sirles, Director, School of Social Work
Bachelor of Arts, Languages	110-111	11-1-10	Judith Moore, Chair, Languages

Course Content Guide
University of Alaska Anchorage
College of Arts and Sciences
Department of English

I. Initiation Date: November, 2010

II. Course Information

A.	College:	College of Arts and Sciences
B.	Course Title:	Advanced Composition
C.	Course Number:	ENGL A311
D.	Credit Hours:	3.0 Credits
E.	Contact Time:	3 hours per week
F.	Grading Information:	A-F
G.	Course Description:	Advanced instruction in composing and revising, with focus on inventional strategies, and audience, persuasion, and style.
H.	Status of Course:	The course fulfills a requirement for BA in English and English Minor, Professional Writing.
I.	Lab Fees:	Technology fee
J.	Coordination:	UAA Faculty Listserv
K.	Prerequisites:	[ENGL A211 or ENGL A212 or ENGL A213 or ENGL A214] with min. grade of C
L.	Registration Restrictions:	N/A

III. Course Level Justification

IV. An upper division designation is appropriate for a course that requires students to understand the relationship between classical rhetoric and contemporary composing, and that requires students to establish their rhetorical situation more independently,

V. Instructional Goals and Defined Outcomes

Instructional Goals *The instructor will:*	**Student Outcomes** *Students will be able to:*	**Assessment Methods**
Lecture, lead discussion, and demonstrate the differences between ancient and modern rhetorics	Analyze the differences between ancient and modern rhetorics	Prompted discussion board postings Progymnastic exercises
Explain and demonstrate inventional schemes and guide students individually through written commentary on papers	Practice inventional schemes and use them to generate written papers	Prompted discussion board postings Invention assignments
Explain and demonstrate arrangement patterns in a rhetorical context and guide students individually through written commentary on papers	Analyze the relationship of arrangement to the rhetorical situation and implement appropriate arrangement choices in their writing	Papers and revisions
Explain and demonstrate style principles and guide students individually through written commentary on papers	Practice style principles and incorporate them into their writing	Papers and revisions Style portfolio

VI. Topical Course Outline

A. Writing as social interaction
    1. Theories of language: language as representative vs. language as social construction
    2. Ideology and commonplaces
    3. Rhetorical reading strategies
B. Ancient and modern rhetorics
    1. Ancient attitudes toward rhetoric
    2. Differences between modern and ancient rhetorics
C. Invention
    1. Kairos
    2. Stasis theory
    3. The commonplaces
    4. Ethical proof (ethos)
    5. Pathetic proof (pathos)
    6. Extrinsic proof (logos)
D. Arrangement
    1. Ancient teaching about arrangement
        a) The exordium
        b) The narrative
        c) The partition
        d) The arguments from confirmation and refutation
        e) The peroration
    2. The formal topics
        a) Definition

b) Division
c) Classification
d) Similarity (Comparison)

E. Style
1. Correctness and choices
2. Appropriateness: kairos and style
3. Clarity (character, action, topic, stress)
4. Grace (conciseness, shape, elegance)
5. Coherence
6. Ornament
7. Imitation and progymnasta

F. Memory
1. Memory and kairos
2. Ancient memory systems
3. Modern versions of ancient memory systems
4. Electronic memory systems

VII. Suggested Texts

Bean, John C., Virginia A. Chappell, and Alice M. Gillam. *Reading Rhetorically*. 3rd ed. New York: Pearson/Longman, 2010. Print.

Crowley, Sharon and Deborah Hawhee. *Ancient Rhetorics for Contemporary Students.* 4th ed. New York: Pearson/Longman, 2008. Print.

Williams, Joseph M. *Style: Ten Lessons in Clarity and Grace*. 9th ed. Boston: Thomson/Heinle, 2004. Print.

VIII. Bibliography

Adler-Kassner, Linda, Robert Crooks, and Ann Watters, eds. *Writing the Community: Concepts and Models for Service-Learning in Composition.* Washington, DC: American Association for Higher Education, 1997. Print.

Barton, David, and Mary Hamilton. *Local Literacies: Reading and Writing in One Community.* New York: Routledge, 1998. Print.

Bishop, Wendy, ed. *Acts of Revision: A Guide for Writers.* Portsmouth, N.H.: Boynton/Cook, 2004. Print.

Branch, Kirk. *"Eyes on the Ought to Be": What We Teach When We Teach About Literacy*. Cresskill: Hampton P, 2007. Print.

Brandt, Deborah. *Literacy in American Lives.* Cambridge, UK: Cambridge UP, 2001. Print.

Brent, Doug. *Reading as Rhetorical Invention: Knowledge, Persuasion, and the Teaching of Research-based Writing*. Urbana, Ill.: National Council of Teachers of English, 1992. Print.

Burkhardt, Joanna M., Mary C. MacDonald, and Andree J. Rathemacher. *Teaching Information Literacy: 35 Practical, Standards-based Exercises for College Students*. Chicago: American Library Association, 2003. Print.

Burns, Philip J. "Supporting Deliberative Democracy: Pedagogical Arts of the Contact Zone of the Electronic Public Sphere." *Rhetoric Review* 18.1 (1999): 128-46. Print.

Carroll, Jeffrey. "Essence, Stasis, and Dialectic." *Rhetoric Review* 23.2 (2004): 156-70. Print.

Chambliss, Marilyn J. and Ruth Garner. "Do Adults Change their Minds After Reading Persuasive Texts?" *Written Communication* 13.3 (1996): 291-313. Print.

Coogan, David. "Community Literacy as Civic Dialogue" *Community Literacy Journal* 1.1 (2006): 96–108. Print.

Corbett, Edward P.J. *Classical Rhetoric for the Modern Student*. New York: Oxford UP, 1965. Print.

Crosswhite, James. *The Rhetoric of Reason: Writing and the Attractions of Argument.* Madison: U of Wisconsin P, 1996. Print.

Cushman, Ellen, Eugene R. Kintgen, Barry M. Kroll, and Mike Rose, eds. *Literacy: A Critical Sourcebook.* Boston: Bedford/St. Martin's P, 2001. Print.

Deans, Thomas. *Writing Partnerships: Service-Learning in Composition.* New York: NCTE, 2000. Print.

Ede, Lisa. *Work in Progress: A Guide to Academic Writing and Revising.* 6th ed. Boston: Bedford/St. Martin, 2004. Print.

Emmel, Barbara A. "Toward a Pedagogy of the Enthymeme: The Roles of Dialogue, Intention, and Function in Shaping Argument." *Rhetoric Review* 13.1 (1994): 132-48. Print.

Faber, Brenton. *Community Action and Organizational Change: Image, Narrative, Identity.* Carbondale: Southern Illinois UP, 2002. Print.

Fahnestock, Jeanne and Marie Secor. *A Rhetoric of Argument*. Brief ed., 3rd ed. Boston: McGraw-Hill, 2004. Print.

Fahnestock, Jeanne. "Teaching Argumentation in the Junior-Level Course." *Teaching Advanced Composition.* Ed. Katherine Adams and John Adams. Portsmouth, NH: Boynton, 1991. 179-93. Print.

Ferris, Dana R. "Rhetorical Strategies in Student Persuasive Writing: Differences between Native and Non-Native English Speakers." *Research in the Teaching of English* 28.1 (1994): 45-65. Print.

Flower, Linda "Talking Across Difference: Intercultural Rhetoric and the Search for Situated Knowledge." *College Composition and Communication* 55.1 (2003): 38–68. Print.

Flower, Linda, and Julia Deems. "Conflict in Community Collaboration." *New Perspectives on Rhetorical Invention.* Ed. Janet M. Atwill and Janice M. Lauer. Knoxville: U Tennessee P, 2002. 96–130. Print.

Flower, Linda. *Community Literacy and the Rhetoric of Engagement.* Carbondale: Southern Illinois UP, 2008. Print.

Frank, David A. "Argumentation Studies in the Wake of the New Rhetoric." *Argumentation & Advocacy* 40.4 (2004): 267-83. Print.

Gage, John T. "A General Theory of the Enthymeme for Advanced Composition." *Teaching Advanced Composition.* Ed. Katherine Adams and John Adams. Portsmouth, NH: Boynton, 1991. 161-78. Print.

George, Diana. "The Word on the Street: Public Discourse in a Culture of Disconnect." *Reflections: A Journal of Writing, Community Literacy* 2.2 (2002): 5–18. Print.

Heath, Shirley Brice. *Ways with Words: Language, Life, and Work in Communities and Classrooms.* New York: Cambridge UP, 1983. Print.

Higgins, Lorraine, and Lisa D. Brush. "Personal Experience Narrative and Public Debate: Writing the Wrongs of Welfare." *College Composition and Communication.* 57.4 (2006): 694–729. Print.

Higgins, Lorraine, Elenore Long, and Linda Flower. "A Rhetorical Model of Community Literacy." *Community Literacy Journal* 1.1 (2006): 9–42. Print.

Horning, Alice S. *Revision Revisited*. Cresskill, NJ: Hampton Press, 2002. Print.

Horning, Alice, Anne Becker, eds. Revision: history, theory, and practice. , West Lafayette, Indiana: Parlor Press and The WAC Clearinghouse. Print.

Howard, Ursula. "History of Writing in the Community." *Handbook of Research on Writing: History, Society, School, Individual, Text.* Ed. Charles Bazerman. Mahwah: Lawrence Erlbaum Associates, 2008. 237-54. Print.

Hull, Glynda A., and Mira-Lisa Katz. "Crafting an Agentive Self: Case Studies of Digital Storytelling." *Research in the Teaching of English* 41.1 (2006): 43–81. Print.

Kaplan, R.B. "Foreword: What in the World is Contrastive Rhetoric?" *Contrastive Rhetoric Revisited and Redefined.* Ed. Clayann Gilliam Panetta. Mahwah, NJ: LEA, 2001. vii-xx. Print.

Keith, William M. and Christian O. Lundberg. *The Essential Guide to Rhetoric*. New York: Bedford/St. Martin's, 2008. Print.

Kinneavy, James. "*Kairos*: A Neglected Concept in Classical Rhetoric." *Rhetoric and Praxis: The Contribution of Classical Rhetoric to Practical Reasoning.* Washington DC: Catholic UP, 1986. 79- 105. Print.

Kolln, Martha .J. and Loretta S. Gray. *Rhetorical Grammar: Grammatical Choices, Rhetorical Effects.* 6th ed. New York: Longman, 2009. Print.

Kroll, Barry M. "Arguing about Public Issues: What Can We Learn from Practical Ethics?" *Rhetoric Review* 16.1 (1997): 105-19. Print.

Lanham, Richard. *A Handlist of Rhetorical Terms*. 2nd ed. Los Angeles: University of California Press, 1991. Print.

Lauer, Janice. M. Invention in rhetoric and composition West Lafayette, Indiana: Parlor Press and The WAC Clearinghouse, 2004. Print.

Matalene, Carolyn. "Experience as Evidence: Teaching Students to Write Honestly and Knowledgeably about Public Issues." *Rhetoric Review* 10.2 (1992): 252-65. Print.

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Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College	1b. Division	1c. Department
AS CAS	AMSC Division of Math Science	Physics

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
PHYS	A123L	NA	1	(0+3)

6. Complete Course Title
Basic Physics I Laboratory

Abbreviated Title for Transcript (30 character)

7. Type of Course ☒ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action: ☐ Add *or* ☒ Change *or* ☐ Delete

If a change, mark appropriate boxes:

- ☐ Prefix
- ☐ Credits
- ☐ Title
- ☐ Grading Basis
- ☒ Course Description
- ☐ Test Score Prerequisites
- ☐ Other Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG (please specify)
- ☐ Course Number
- ☐ Contact Hours
- ☐ Repeat Status
- ☐ Cross-Listed/Stacked
- ☒ Course Prerequisites
- ☐ Co-requisites
- ☒ Registration Restrictions

9. Repeat Status No # of Repeats Max Credits

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

11. Implementation Date semester/year
From: Fall/2011 To: /9999

12. ☐ Cross Listed with NA
☐ Stacked with NA
Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

Impacted Program/Course	*Catalog Page(s) Impacted*	*Date of Coordination*	*Chair/Coordinator Contacted*
1. see attached sheet			
2.			
3.			

Initiator Name (typed): J. Pantaleone Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 10-15-10
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 10-15-10

14. General Education Requirement *Mark appropriate box:*
☐ Oral Communication ☐ Written Communication ☐ Quantitative Skills ☐ Humanities
☐ Fine Arts ☐ Social Sciences ☒ Natural Sciences ☐ Integrative Capstone

15. Course Description *(suggested length 20 to 50 words)*
Introductory physics laboratory with experiments in mechanics, fluids and thermodynamics using computerized data collection and analysis. Special Note: Requires hands-on use of instruments and performance of experiments in a college or university physics laboratory.

16a. Course Prerequisite(s) *(list prefix and number)*
[MATH A105 or any course for which MATH A105 is in the prerequisite chain] and [PHYS A123 with a minimum grade of C or concurrent enrollment].

16b. Test Score(s)
NA

16c. Co-requisite(s) *(concurrent enrollment required)*
NA

16d. Other Restriction(s)
☐ College ☐ Major ☐ Class ☐ Level

16e. Registration Restriction(s) *(non-codable)*
If the equivalent of PHYS 123 is taken from another institution, it must be completed prior to taking PHYS A123L

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
To clarify expectations for a physics lab course.

Initiator (faculty only) Date

Initiator (TYPE NAME)

☐ Approved
☐ Disapproved
Department Chairperson Date

☐ Approved
☐ Disapproved
Curriculum Committee Chairperson Date

☐ Approved
☐ Disapproved
Dean/Director of School/College Date

☐ Approved
☐ Disapproved
Undergraduate/Graduate Academic Board Chairperson Date

☐ Approved
☐ Disapproved
Provost or Designee Date

13a. Impacted Courses or Programs

Impacted Program/Courses	Catalog Page(s) Impacted	Date of Coord.	Chair/Coordinator Contacted
Biological, BA & BS	94	10/15/2010	Bio Chair, Causey
Natural Sciences, BS	117	10/15/2010	Natural Science Chairs:
		10/15/2010	Bio Chair, Causey
		10/15/2010	Geol Chair, Munk
		10/15/2010	Chem Chair, Holmberg
		10/15/2010	Physics Chair, Pantaleone
Aviation, AS and BS	176&177	10/15/2010	Aviation Dir, Capozzi
Geomatics, AS&BS	231	10/15/2010	Geo Chair, Davis
PHYS 124L	452	10/15/2010	Physics Chair, Pantaleone
CM 331	352	10/15/2010	CM Chair, Ketner
CAS BS	85	10/15/2010	Anth Chair, Hanson
		10/15/2010	Bio Chair, Causey
		10/15/2010	CS Chair, Thiru
		10/15/2010	Geol Chair, Munk
		10/15/2010	Math Chair, Thiru
		10/15/2010	Psych Chair, Rosich
		10/15/2010	Soc Chair, Riley
UAA Branch Campuses		10/15/2010	
Kenai		10/15/2010	Dir. Turner
Kodiak		10/15/2010	Dir. Bolson
Mat-Su		10/15/2010	Dir. Clark

COURSE CONTENT GUIDE

I. Date of Initiation: October 15, 2010

II. Course Information

1. **College:** CAS
2. **Course Subject:** PHYS
3. **Course Number:** A123L
4. **Number of Credits:** 1
5. **Number of Contact Hours:** 0+3
6. **Course Title:** Basic Physics I Laboratory
7. **Grading Basis:** A-F
8. **Course Description:**

   Introductory physics laboratory with experiments in mechanics, fluids and thermodynamics using computerized data collection and analysis. Special Note: Requires hands-on use of instruments and performance of experiments in a college or university physics laboratory.

9. **Course Prerequisite:**

   [MATH A105 or any course for which MATH A105 is in the prerequisite chain] and [PHYS A123 with a minimum grade of C or concurrent enrollment].

III. Instructional Goals and Student Outcomes

1. Instructional Goals

1. To help students understand the basis of knowledge in physics. Instructor will guide students to distinguish between inferences based on theory and on the outcomes of experiments.
2. To reinforce the concepts covered in the PHYS A123 lecture.
3. To provide students with measurement techniques and other experimental skills useful in the study of physical phenomena. The tools to be used include rulers, micrometers, sonic range finders, force sensors, video analysis and computerized data collection equipment. The instructor will provide hands-on supervision of the student's use of these tools in a laboratory setting.
4. To provide the student with data analysis techniques using computers. These include graphing, curve fitting, modeling and statistical analysis. The instructor will provide hands-on supervision of the student's use of these methods in a laboratory setting.

5. To provide the student with an appreciation of uncertainties in measured quantities and uncertainty analysis techniques.
6. To help students develop collaborative learning skills in the investigation of physical phenomena. The instructor will provide hands-on supervision and guidance to students working in small groups in a laboratory setting.
7. To provide opportunities for students to gain familiarity and experience with the equipment and procedures of a college level physics laboratory.

2. Student Outcomes and Assessment Measures

The students in this physics lab course will be able to

Outcomes	**Measures**
design and conduct experiments and draw inferences from their observations.	Weekly lab reports.
demonstrate competency applying Newton's laws to physical situations.	Weekly lab reports, midterm and final exams.
demonstrate hands-on competency in using measuring devices.	Performance in a laboratory setting.
demonstrate hands-on competency in using computers to analyze data.	Performance in a laboratory setting.
estimate the uncertainty in all physical measurements and will propagate this uncertainty to their final, calculated results.	Weekly lab reports and exams.
collaborate in small groups to set up equipment, take measurements and analyze data.	Performance in a laboratory setting.
describe the equipment and safety procedures of a college level physics laboratory.	Demonstrated compliance with laboratory safety procedures and correct operation of equipment under the direction of physics laboratory personnel.

IV. Topical Course Outline

Here is a list of experiments typically performed in the course.

1. Method of Least Squares
2. Vector Addition
3. Straight Line Motion at Constant Speed
4. Uniformly Accelerated Motion
5. Atwood Machine with Newton's Second Law

6. Atwood Machine with Conservation of Energy
7. Kinetic Energy -Work Theorem
8. Collisions
9. Ballistic Pendulum
10. Static Equilibrium
11. Archimedes Principle
12. Thermal Coefficient of Linear Expansion
13. Mechanical Equivalent of Heat

V. Suggested Text

John O. Messer, *Physics 123 Lab Manual*, printed by the UAA Physics Department, Fall 2010/Spring 2011.

VI. Bibliography

C. Bernard and C. Epp, *Laboratory Experiments in College Physics*, Wiley and Sons, New York, seventh ed. (2008).

J. Wilson and C. Hernandez, *Physics Laboratory Experiments*, Brooks Cole, Boston, seventh ed. (2009).

Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College	1b. Division	1c. Department
AS CAS	AMSC Division of Math Science	Physics

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
PHYS	A124L	NA	1	(0+3)

6. Complete Course Title
Basic Physics II Laboratory

Abbreviated Title for Transcript (30 character)

7. Type of Course ☒ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action: ☐ Add *or* ☒ Change *or* ☐ Delete

If a change, mark appropriate boxes:

- ☐ Prefix
- ☐ Credits
- ☐ Title
- ☐ Grading Basis
- ☒ Course Description
- ☐ Test Score Prerequisites
- ☐ Other Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG (please specify)
- ☐ Course Number
- ☐ Contact Hours
- ☐ Repeat Status
- ☐ Cross-Listed/Stacked
- ☒ Course Prerequisites
- ☐ Co-requisites
- ☒ Registration Restrictions

9. Repeat Status No # of Repeats Max Credits

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

11. Implementation Date semester/year
From: Fall/2011 To: /9999

12. ☐ Cross Listed with NA
☐ Stacked with NA
Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

Impacted Program/Course	*Catalog Page(s) Impacted*	*Date of Coordination*	*Chair/Coordinator Contacted*
1. see attached sheet			
2.			
3.			

Initiator Name (typed): J. Pantaleone Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 10-15-10
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 10-15-10

14. General Education Requirement
Mark appropriate box:
☐ Oral Communication ☐ Written Communication ☐ Quantitative Skills ☐ Humanities
☐ Fine Arts ☐ Social Sciences ☒ Natural Sciences ☐ Integrative Capstone

15. Course Description *(suggested length 20 to 50 words)*
Introductory physics laboratory with experiments in electric and magnetic fields, circuits, waves and light using computerized data collection and analysis. Special Note: Requires hands-on use of instruments and performance of experiments in a college or university laboratory.

16a. Course Prerequisite(s) *(list prefix and number)*
[PHYS A123 and PHYS A123L] with minimum grades of C and [PHYS A124 with a minimum grade of C or concurrent enrollment].

16b. Test Score(s)
NA

16c. Co-requisite(s) *(concurrent enrollment required)*
NA

16d. Other Restriction(s)
☐ College ☐ Major ☐ Class ☐ Level

16e. Registration Restriction(s) *(non-codable)*
If the equivalent of PHYS A124 is taken from another institution, it must be completed prior to taking PHYS A124L

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
To clarify expectations for a physics lab course.

Initiator (faculty only) Date

Initiator (TYPE NAME)

☐ Approved
☐ Disapproved
Department Chairperson Date

☐ Approved
☐ Disapproved
Curriculum Committee Chairperson Date

☐ Approved
☐ Disapproved
Dean/Director of School/College Date

☐ Approved
☐ Disapproved
Undergraduate/Graduate Academic Board Chairperson Date

☐ Approved
☐ Disapproved
Provost or Designee Date

13a. Impacted Courses or Programs

Impacted Program/Courses	Catalog Page(s) Impacted	Date of Coord.	Chair/Coordinator Contacted
Biological, BA & BS	94	10/15/2010	Bio Chair, Causey
Natural Sciences, BS	118	10/15/2010	Natural Science Chairs:
		10/15/2010	Bio Chair, Causey
		10/15/2010	Geol Chair, Munk
		10/15/2010	Chem Chair, Holmberg
		10/15/2010	Physics Chair, Pantaleone
Geomatics, AS&BS	231	10/15/2010	GEO Chair, Davis
CAS BS	85	10/15/2010	Anth Chair, Hanson
		10/15/2010	Bio Chair, Causey
		10/15/2010	CS Chair, Thiru
		10/15/2010	Geol Chair, Munk
		10/15/2010	Math Chair, Thiru
		10/15/2010	Psych Chair, Rosich
		10/15/2010	Soc Chair, Riley
UAA Branch Campuses		10/15/2010	
Kenai		10/15/2010	Dir. Turner
Kodiak		10/15/2010	Dir. Bolson
Mat-Su		10/15/2010	Dir. Clark

COURSE CONTENT GUIDE

I. Date of Initiation: October 15, 2010

II. Course Information

1. **College:** CAS
2. **Course Subject:** PHYS
3. **Course Number:** A124L
4. **Number of Credits:** 1
5. **Number of Contact Hours:** 0+3
6. **Course Title:** Basic Physics II Laboratory
7. **Grading Basis:** A-F
8. **Course Description:**
   Introductory physics laboratory with experiments in electric and magnetic fields, circuits, waves and light using computerized data collection and analysis. Special Note: Requires hands-on use of instruments and performance of experiments in a college or university laboratory.

9. **Course Prerequisite:**
   [PHYS A123 and PHYS A123L] with minimum grades of C and [PHYS A124 with a minimum grade of C or concurrent enrollment].

III. Instructional Goals and Student Outcomes

1. Instructional Goals

1. To help students understand the basis of knowledge in physics. Instructor will guide students to distinguish between inferences based on theory and on the outcomes of experiments.
2. To reinforce the concepts covered in the PHYS A124 lecture.
3. To provide students with measurement techniques and other experimental skills useful in the study of physical phenomena. The tools to be used include ammeters, voltmeters, capacitance meters, gauss meters, photometers and computerized data collection equipment. The instructor will provide hands-on supervision of the student's use of these tools in a laboratory setting.
4. To provide the student with data analysis techniques using computers. These include graphing, curve fitting, modeling and statistical analysis. The instructor will provide hands-on supervision of the student's use of these methods in a laboratory setting.
5. To provide the student with an appreciation of uncertainties in measured quantities and uncertainty analysis techniques.

6. To help students develop collaborative learning skills in the investigation of physical phenomena. The instructor will provide hands-on supervision and guidance to students working in small groups in a laboratory setting.
7. To provide opportunities for students to gain familiarity and experience with the equipment and procedures of a college level physics laboratory.

2. Student Outcomes and Assessment Measures

Students in this Physics lab course will be able to

Outcomes	**Measures**
design and conduct experiments and draw inferences from their observations.	Weekly lab reports.
demonstrate competency applying Maxwell's equations to physical situations.	Weekly lab reports, midterm and final exams.
demonstrate hands-on competency in using measuring devices.	Performance in a laboratory setting.
demonstrate hands-on competency in using computers to analyze data.	Performance in a laboratory setting.
estimate the uncertainty in all physical measurements and will propagate this uncertainty to their final, calculated results.	Weekly lab reports and exams.
collaborate in small groups to setup equipment, take measurements and analyze data.	Performance in a laboratory setting.
describe the equipment and safety procedures of a college level physics laboratory.	Demonstrated compliance with laboratory safety procedures and correct operation of equipment under the direction of physics laboratory personnel.

IV. Topical Course Outline

Here is a list of experiments typically performed in the course.

1. Measuring the Spring Constant
2. Standing Waves on a String
3. Sound
4. Equipotentials and Fields
5. Ohm's Law
6. Circuit Analyses with Light Bulbs
7. Kirchhoff's Rules

8. Electromagnetic Induction
9. Building a DC Motor
10. Reflection and Refraction
11. Spherical Mirrors and Lenses

V. Suggested Text

John O. Messer, *Physics 124 Lab Manual*, Printed by the UAA Physics Department, Fall 2010/Spring 2011.

VI. Bibliography

C. Bernard and C. Epp, *Laboratory Experiments in College Physics*, Wiley and Sons, New York, seventh ed. (2008).

J. Wilson and C. Hernandez, *Physics Laboratory Experiments*, Brooks Cole, Boston, seventh ed. (2009).

Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College	1b. Division	1c. Department
AS CAS	AMSC Division of Math Science	Physics

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
PHYS	A211L	NA	1	(0+3)

6. Complete Course Title
General Physics I Laboratory

Abbreviated Title for Transcript (30 character)

7. Type of Course ☒ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action: ☐ Add *or* ☒ Change *or* ☐ Delete

If a change, mark appropriate boxes:

- ☐ Prefix
- ☐ Credits
- ☐ Title
- ☐ Grading Basis
- ☒ Course Description
- ☐ Test Score Prerequisites
- ☐ Other Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG (please specify)
- ☐ Course Number
- ☐ Contact Hours
- ☐ Repeat Status
- ☐ Cross-Listed/Stacked
- ☐ Course Prerequisites
- ☐ Co-requisites
- ☒ Registration Restrictions

9. Repeat Status No # of Repeats Max Credits

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

11. Implementation Date semester/year
From: Fall/2011 To: /9999

12. ☐ Cross Listed with NA
☐ Stacked with NA
Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

Impacted Program/Course	*Catalog Page(s) Impacted*	*Date of Coordination*	*Chair/Coordinator Contacted*
1. see attached sheet			
2.			
3.			

Initiator Name (typed): J. Pantaleone Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 10-15-10
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 10-15-10

14. General Education Requirement *Mark appropriate box:*
☐ Oral Communication ☐ Written Communication ☐ Quantitative Skills ☐ Humanities
☐ Fine Arts ☐ Social Sciences ☒ Natural Sciences ☐ Integrative Capstone

15. Course Description *(suggested length 20 to 50 words)*
Calculus-based introductory physics laboratory with experiments in mechanics, fluids and waves using computerized data collection and analysis. Special Note: Requires hands-on use of instruments and performance of experiments in a college or university laboratory.

16a. Course Prerequisite(s) *(list prefix and number)*	16b. Test Score(s)	16c. Co-requisite(s) *(concurrent enrollment required)*
PHYS A211 with a minimum grade of C or concurrent enrollment.	NA	NA

16d. Other Restriction(s)
☐ College ☐ Major ☐ Class ☐ Level

16e. Registration Restriction(s) *(non-codable)*
If the equivalent of PHYS A211 is taken from another institution, it must be completed prior to taking PHYS A211L

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
To clarify expectations for a physics lab course.

Initiator (faculty only) Date

☐ Approved ☐ Disapproved Dean/Director of School/College Date

Initiator (TYPE NAME)

☐ Approved ☐ Disapproved Department Chairperson Date

☐ Approved ☐ Disapproved Undergraduate/Graduate Academic Board Chairperson Date

☐ Approved ☐ Disapproved Curriculum Committee Chairperson Date

☐ Approved ☐ Disapproved Provost or Designee Date

13a. Impacted Courses or Programs

Impacted Program/Courses	Catalog Page(s) Impacted	Date of Coord.	Chair/Coordinator Contacted
Biological, BS	95	10/15/2010	Bio Chair, Causey
Chemistry, BS	97	10/15/2010	Chem Chair, Holmberg
Physics, Minor	120	10/15/2010	Phys Chair, Pantaleone
Civil Eng., BS	224	10/15/2010	CE Chair, Smith
Enginering, BS	227	10/15/2010	BSE Chair, Baker
Geomatics, AS&BS	231	10/15/2010	GEO Chair, Davis
ES A209	387	10/15/2010	ENG Dean, Lang
ES A341	387	10/15/2010	ENG Dean, Lang
CAS BS	85	10/15/2010	Anth Chair, Hanson
		10/15/2010	Bio Chair, Causey
		10/15/2010	CS Chair, Thiru
		10/15/2010	Geol Chair, Munk
		10/15/2010	Math Chair, Thiru
		10/15/2010	Psych Chair, Rosich
		10/15/2010	Soc Chair, Riley
UAA Branch Campuses		10/15/2010	
Kenai		10/15/2010	Dir. Turner
Kodiak		10/15/2010	Dir. Bolson
Mat-Su		10/15/2010	Dir. Clark

COURSE CONTENT GUIDE

I. Date of Initiation: October 15, 2010

II. Course Information

1. **College:** CAS
2. **Course Subject:** PHYS
3. **Course Number:** A211L
4. **Number of Credits:** 1
5. **Number of Contact Hours:** 0+3
6. **Course Title:** General Physics I Laboratory
7. **Grading Basis:** A-F
8. **Course Description:**

   Calculus-based introductory physics laboratory with experiments in mechanics, fluids and waves using computerized data collection and analysis. Special Note: Requires hands-on use of instruments and performance of experiments in a college or university laboratory.

9. **Course Prerequisite:**

   PHYS A211 with a minimum grade of C or concurrent enrollment.

III. Instructional Goals and Student Outcomes

1. Instructional Goals

1. To help students understand the basis of knowledge in physics. Instructor will guide students to distinguish between inferences based on theory and on the outcomes of experiments.
2. To reinforce the concepts covered in the PHYS A211 lecture.
3. To provide students with measurement techniques and other experimental skills useful in the study of physical phenomena. The tools to be used include rulers, micrometers, sonic range finders, force sensors, video analysis and computerized data collection equipment. The instructor will provide hands-on supervision of the student's use of these tools in a laboratory setting.
4. To provide the student with data analysis techniques using computers. These include graphing, curve fitting, modeling and statistical analysis. The instructor will provide hands-on supervision of the student's use of these methods in a laboratory setting.
5. To provide the student with an appreciation of uncertainties in measured quantities and uncertainty analysis techniques.

6. To help students develop collaborative learning skills in the investigation of physical phenomena. The instructor will provide hands-on supervision and guidance to students working in small groups in a laboratory setting.
7. To provide opportunities for students to gain familiarity and experience with the equipment and procedures of a college level physics laboratory.

2. Student Outcomes and Assessment Measures

The students in this Physics lab course will be able to

Outcomes	**Measures**
design and conduct experiments and draw inferences from their observations.	Weekly lab reports.
demonstrate competency applying Newton's laws to physical situations.	Weekly lab reports, midterm and final exams.
demonstrate hands-on competency in using measuring devices.	Performance in a laboratory setting.
demonstrate hands-on competency in using computers to analyze data.	Performance in a laboratory setting.
estimate the uncertainty in all physical measurements and will propagate this uncertainty to their final, calculated results.	Weekly lab reports and exams.
collaborate in small groups to set up equipment, take measurements and analyze data.	Performance in a laboratory setting.
describe the equipment and safety procedures of a college level physics laboratory.	Demonstrated compliance with laboratory safety procedures and correct operation of equipment under the direction of physics laboratory personnel.

IV. Topical Course Outline

Here is a list of experiments typically performed in the course.

1. Position, Velocity and Acceleration Graphs
2. Vector Addition
3. 2D Kinematics
4. Propagation of Errors
5. Cart on an Inclined Plane
6. Acceleration of a Sliding Box.
7. Conservation of Momentum
8. Ballistic Pendulum
9. Rotational Motion

10. Simple Harmonic Motion
11. Waves on a String
12. Added Mass of a Ball in the Air

V. Suggested Text

J. Pantaleone, *Physics 211 Laboratory Manual*, printed by the UAA Physics Department, Fall 2010/Spring 2011.

VI. Bibliography

C. Bernard and C. Epp, *Laboratory Experiments in College Physics*, Wiley and Sons, New York, seventh ed. (2008).

J. Wilson and C. Hernandez, *Physics Laboratory Experiments*, Brooks Cole, Boston, seventh ed. (2009).

Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College	1b. Division	1c. Department
AS CAS	AMSC Division of Math Science	Physics

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
PHYS	A212L	NA	1	(0+3)

6. Complete Course Title
General Physics II Laboratory

Abbreviated Title for Transcript (30 character)

7. Type of Course ☒ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action: ☐ Add *or* ☒ Change *or* ☐ Delete

If a change, mark appropriate boxes:

- ☐ Prefix
- ☐ Credits
- ☐ Title
- ☐ Grading Basis
- ☒ Course Description
- ☐ Test Score Prerequisites
- ☐ Other Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☒ Other CCG (please specify)
- ☐ Course Number
- ☐ Contact Hours
- ☐ Repeat Status
- ☐ Cross-Listed/Stacked
- ☒ Course Prerequisites
- ☐ Co-requisites
- ☒ Registration Restrictions

9. Repeat Status No # of Repeats Max Credits

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

11. Implementation Date semester/year
From: Fall/2011 To: /9999

12. ☐ Cross Listed with NA
☐ Stacked with NA
Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.

Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

Impacted Program/Course	*Catalog Page(s) Impacted*	*Date of Coordination*	*Chair/Coordinator Contacted*
1. see attached sheet			
2.			
3.			

Initiator Name (typed): J. Pantaleone Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 10-15-10
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 10-15-10

14. General Education Requirement
Mark appropriate box:
☐ Oral Communication ☐ Written Communication ☐ Quantitative Skills ☐ Humanities
☐ Fine Arts ☐ Social Sciences ☒ Natural Sciences ☐ Integrative Capstone

15. Course Description *(suggested length 20 to 50 words)*
Calculus-based introductory physics laboratory with experiments in electric and magnetic fields, circuits and light using computerized data collection and analysis. Special Note: Requires hands-on use of instruments and performance of experiments in a college or university laboratory.

16a. Course Prerequisite(s) *(list prefix and number)*
[PHYS A211 and PHYS A211L] with minimum grades of C and [PHYS A212 with a minimum grade of C or concurrent enrollment].

16b. Test Score(s)

16c. Co-requisite(s) *(concurrent enrollment required)*

16d. Other Restriction(s)
☐ College ☐ Major ☐ Class ☐ Level

16e. Registration Restriction(s) *(non-codable)*
If the equivalent of PHYS A212 is taken from another institution, it must be completed prior to taking PHYS A212L

17. ☒ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
To clarify expectations for a physics lab course and to add PHYS 211L as a prerequisite

Initiator (faculty only) Date

Initiator (TYPE NAME)

☐ Approved ☐ Disapproved Department Chairperson Date

☐ Approved ☐ Disapproved Curriculum Committee Chairperson Date

☐ Approved ☐ Disapproved Dean/Director of School/College Date

☐ Approved ☐ Disapproved Undergraduate/Graduate Academic Board Chairperson Date

☐ Approved ☐ Disapproved Provost or Designee Date

13a. Impacted Courses or Programs

Impacted Program/Courses	Catalog Page(s) Impacted	Date of Coord.	Chair/Coordinator Contacted
Biological, BS	95	10/15/2010	Bio Chair, Causey
Chemistry, BS	97	10/15/2010	Chem Chair, Holmberg
Physics, Minor	120	10/15/2010	Phys Chair, Pantaleone
Civil Eng., BS	224	10/15/2010	CE Chair, Smith
Enginering, BS	227	10/15/2010	BSE Chair, Baker
Geomatics, AS&BS	231	10/15/2010	GEO Chair, Davis
CHEM 331	345	10/15/2010	Chem Chair, Holmberg
EE 314	381	10/15/2010	BSE Chair, Baker
PHYS 314	452	10/15/2010	Phys Chair, Pantaleone
CAS BS	85	10/15/2010	Anth Chair, Hanson
		10/15/2010	Bio Chair, Causey
		10/15/2010	CS Chair, Thiru
		10/15/2010	Geol Chair, Munk
		10/15/2010	Math Chair, Thiru
		10/15/2010	Psych Chair, Rosich
		10/15/2010	Soc Chair, Riley
UAA Branch Campuses		10/15/2010	
Kenai		10/15/2010	Dir. Turner
Kodiak		10/15/2010	Dir. Bolson
Mat-Su		10/15/2010	Dir. Clark

COURSE CONTENT GUIDE

I. Date of Initiation: October 15, 2010

II. Course Information

1. **College:** CAS
2. **Course Subject:** PHYS
3. **Course Number:** A212L
4. **Number of Credits:** 1
5. **Number of Contact Hours:** 0+3
6. **Course Title:** General Physics II Laboratory
7. **Grading Basis:** A-F
8. **Course Description:**
   Calculus-based introductory physics laboratory with experiments in electric and magnetic fields, circuits and light using computerized data collection and analysis. Special Note: Requires hands-on use of instruments and performance of experiments in a college or university laboratory.

9. **Course Prerequisite:**
   [PHYS A211 and PHYS A211L] with minimum grades of C and [PHYS A212 with a minimum grade of C or concurrent enrollment].

III. Instructional Goals and Student Outcomes

1. Instructional Goals

1. To help students understand the basis of knowledge in physics. Instructor will guide students to distinguish between inferences based on theory and on the outcomes of experiments.
2. To reinforce the concepts covered in the PHYS A212 lecture.
3. To provide students with measurement techniques and other experimental skills useful in the study of physical phenomena. The tools to be used include ammeters, voltmeters, capacitance meters, gauss meters, oscilloscopes, photometers and computerized data collection equipment. The instructor will provide hands-on supervision of the student's use of these tools in a laboratory setting.
4. To provide the student with data analysis techniques using computers. These include graphing, curve fitting, modeling and statistical analysis. The instructor will provide hands-on supervision of the student's use of these methods in a laboratory setting.
5. To provide the student with an appreciation of uncertainties in measured quantities and uncertainty analysis techniques.

6. To help students develop collaborative learning skills in the investigation of physical phenomena. The instructor will provide hands-on supervision and guidance to students working in small groups in a laboratory setting.
7. To provide opportunities for students to gain familiarity and experience with the equipment and procedures of a college level physics laboratory.

2. Student Outcomes and Assessment Measures

Students in this Physics lab course will be able to

Outcomes	**Measures**
design and conduct experiments and draw inferences from their observations.	Weekly lab reports.
demonstrate competency applying Maxwell's equations to physical situations.	Weekly lab reports, midterm and final exams.
demonstrate hands-on competency in using measuring devices.	Performance in a laboratory setting.
demonstrate hands-on competency in using computers to analyze data.	Performance in a laboratory setting.
estimate the uncertainty in all physical measurements and will propagate this uncertainty to their final, calculated results.	Weekly lab reports and exams.
collaborate in small groups to set up equipment, take measurements and analyze data.	Performance in a laboratory setting.
describe the equipment and safety procedures of a college level physics laboratory.	Demonstrated compliance with laboratory safety procedures and correct operation of equipment under the direction of physics laboratory personnel.

IV. Topical Course Outline

Here is a list of experiments typically performed in the course.

1. Coulomb's Law
2. Electric Forces and Fields
3. I vs. V for Resistors and Diodes
4. Mystery Circuits
5. Capacitors
6. Magnetic Field of Magnet
7. Charge to Mass Ratio for the Electron

8. Induction, Faraday's Law
9. Build a Motor
10. Geometric Optics
11. Interference and Diffraction of Light

V. Suggested Text

J. Pantaleone, *Physics 212 Laboratory Manual*, printed by the UAA Physcis dept., Fall 2010/Spring 2011.

VI. Bibliography

C. Bernard and C. Epp, *Laboratory Experiments in College Physics*, Wiley and Sons, New Yourk, seventh ed. (2008).

J. Wilson and C. Hernandez, *Physics Laboratory Experiments*, Brooks Cole, Boston, seventh ed. (2009).

Course Action Request
University of Alaska Anchorage
Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College	1b. Division	1c. Department
AS CAS	AMSC Division of Math Science	Mathematical Sciences

2. Course Prefix	3. Course Number	4. Previous Course Prefix & Number	5a. Credits/CEUs	5b. Contact Hours (Lecture + Lab)
STAT	A307	N/A	4	(4+0)

6. Complete Course Title
Probability and Statistics
Probability and Statistics
Abbreviated Title for Transcript (30 character)

7. Type of Course ☒ Academic ☐ Preparatory/Development ☐ Non-credit ☐ CEU ☐ Professional Development

8. Type of Action: ☐ Add *or* ☒ Change *or* ☐ Delete

If a change, mark appropriate boxes:

- ☐ Prefix
- ☒ Credits
- ☒ Title
- ☐ Grading Basis
- ☒ Course Description
- ☐ Test Score Prerequisites
- ☐ Other Restrictions
  - ☐ Class ☐ Level
  - ☐ College ☐ Major
- ☐ Other (please specify)
- ☐ Course Number
- ☒ Contact Hours
- ☐ Repeat Status
- ☐ Cross-Listed/Stacked
- ☒ Course Prerequisites
- ☐ Co-requisites
- ☐ Registration Restrictions

9. Repeat Status No # of Repeats Max Credits

10. Grading Basis ☒ A-F ☐ P/NP ☐ NG

11. Implementation Date semester/year
From: Fa/2011 To: /9999

12. ☐ Cross Listed with
☐ Stacked with
Cross-Listed Coordination Signature

13a. Impacted Courses or Programs: List any programs or college requirements that require this course.
Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.

Impacted Program/Course	*Catalog Page(s) Impacted*	*Date of Coordination*	*Chair/Coordinator Contacted*
1. See attached table.		11/10/2010	
2.			
3.			

Initiator Name (typed): Kanapathi Thiru Initiator Signed Initials: _____ Date:_____

13b. Coordination Email Date: 11/04/2010
submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)

13c. Coordination with Library Liaison Date: 11/10/2010

14. General Education Requirement *Mark appropriate box:*
☐ Oral Communication ☐ Written Communication ☒ Quantitative Skills ☐ Humanities
☐ Fine Arts ☐ Social Sciences ☐ Natural Sciences ☐ Integrative Capstone

15. Course Description *(suggested length 20 to 50 words)*
A calculus-based introduction to probability and statistics with emphasis on scientific applications. Topics include probability, probability distributions for discrete and continuous random variables, joint distributions, mathematical expectation, moment generators, functions of random variables, estimation, and the study of power and significance of hypothesis tests.

16a. Course Prerequisite(s) *(list prefix and number)*	16b. Test Score(s)	16c. Co-requisite(s) *(concurrent enrollment required)*
(MATH A201 or MATH A272) with a grade of C or higher	N/A	N/A

16d. Other Restriction(s)
☐ College ☐ Major ☐ Class ☐ Level

16e. Registration Restriction(s) *(non-codable)*
N/A

17. ☐ Mark if course has fees

18. ☐ Mark if course is a selected topic course

19. Justification for Action
To bridge the gaps between STAT A307 and other subsequent STAT/MATH courses such as STAT A308 and MATH A371.

Initiator (faculty only) Date
Rieken Venema
Initiator (TYPE NAME)

☐ Approved
☐ Disapproved
Department Chairperson Date

☐ Approved
☐ Disapproved
Curriculum Committee Chairperson Date

☐ Approved
☐ Disapproved
Dean/Director of School/College Date

☐ Approved
☐ Disapproved
Undergraduate/Graduate Academic Board Chairperson Date

☐ Approved
☐ Disapproved
Provost or Designee Date

Course Being Changed:	**STAT A307**				
	Type of Impact (course or program)				
Impacted Program or Course	**Course Impacts** ***examples:*** prerequisite, corequisite, recommended	**Program Impacts** ***examples:*** requirement, selective, program credit total	***Catalog Page***	***Type/Date of Notification***	***Chair/Coordinator Contacted*** (not listerve)
BA/BS		GER selective for quantitative skills	80		
BS		CAS selective for Math and statistics	85		
Anthropology BA/BS		Program Selective	88		Christine Hanson
Biology BS		Program Selective	95		Doug Causey
Computer Science BA		Program selective	98		Sam Thiru
Computer Science BS		Program Requirement	99		Sam Thiru
Geological Science		Program Selective	104		LeeAnn Munk
Mathematics BA		Program Requirement	113		Sam Thiru
Mathematics BS		Program Requirement	113		Sam Thiru
Statistics Minor		Program Requirement	124		Sam Thiru
Nursing Science		Program Selective	158		Gail Holtzman
Geomatics BS		Program Selective	231		Donald Davies
MATH A371	Prerequisite		420		Sam Thiru
MATH A407	Prerequisite		420		Sam Thiru
STAT A308	Prerequisite		470		Sam Thiru
STAT A402	Prerequisite		470		Sam Thiru
STAT A407	Prerequisite		470		Sam Thiru

Course Content Guide
University of Alaska Anchorage
College of Arts and Sciences

Department: Mathematical Sciences **Date: 11/08/2010**

Course Title: Probability and Statistics
Course Number: STAT A307 **4 Credits/ (4+0)**

I. Course Description:

A calculus-based introduction to probability and statistics with emphasis on scientific applications. Topics include probability, probability distributions for discrete and continuous random variables, joint distributions, mathematical expectation, moment generators, functions of random variables, estimation, and the study of power and significance of hypothesis tests.

II. Prerequisites: (MATH A201 or MATH A272) with a grade of C or higher

III. Grading Basis: A-F

IV. Instructional Goals and Student Outcomes

(a) Instructional Goals. The instructor will:

- Introduce the basic concepts of probability theory.
- Introduce density functions, distribution functions, mathematical expectations and moment generators for discrete and continuous random variables.
- Present a wide variety of discrete and continuous probability distributions, and introduce the theory of transformation in a single variable case.
- Introduce students to point estimation, and provide the theoretical background for different aspects of statistical inference such as interval estimation and testing hypotheses.

(b) Student Outcomes. Students will be able to:

- Apply basic concepts of probability theory and statistics to applied problems in sciences.
- Demonstrate the relationship between random variables and their distribution functions, and apply transformations of a single variable.
- Use estimation theory including point and interval estimation.
- Formulate hypothesis, calculate the power of a test, and make a decision based on the value of a test statistic or p-value.

V. Guidelines for evaluation

The course will be graded on an A-F basis determined by in-class and/or take-home examinations and class projects. Specifics will be stated in the class syllabus for the course.

VI. Course level justification

The course requires knowledge of topics typically covered in the prerequisite courses of MATH A201 or MATH A272.

VII. Topical course outline

1. Introduction to Probability
   - 1.1 Interpretation of Probabilities
   - 1.2 Sample Space and Events
   - 1.3 Counting Rules and Classical Probability

2. Some Probability Laws
   - 2.1 Axioms of Probability
   - 2.2 Conditional Probability
   - 2.3 Independent Events
   - 2.4 Bayes' Theorem

3. Discrete Distributions
   - 3.1 Random Variables and Probability Mass Functions
   - 3.2 Cumulative Distribution Function
   - 3.3 Mathematical Expectation
   - 3.4 Mean, Variance and Standard Deviation
   - 3.5 Moment Generating Function
   - 3.6 Bernoulli and Binomial Distributions
   - 3.7 Geometric and Negative Binomial Distributions
   - 3.8 Hypergeometric Distribution
   - 3.9 Poisson Distribution

4. Continuous Distributions
   - 4.1 Random Variables and Probability Density Functions
   - 4.2 Cumulative Distribution Function
   - 4.3 Mathematical Expectation
   - 4.4 Moment Generating Function
   - 4.5 Uniform Distribution
   - 4.6 Exponential and Gamma Distributions
   - 4.7 Normal Distribution

5. Determining the Distribution of a Transformed Random Variable
   - 5.1 Transforming a Random Variable with a Discrete Distribution
   - 5.2 Transforming a Random Variable with a Continuous Distribution

6. Joint Distributions (discrete case only)
   6.1 Joint and Marginal Distributions
   6.2 Independence
   6.3 Mathematical Expectation
   6.4 Covariance and Variance of Sum of Random Variables
   6.5 Correlation

7. Sampling
   7.1 Random Sampling
   7.2 Sampling Distributions
   7.3 Central Limit Theorem
   7.4 Normal Approximation for Discrete Distributions

8. Parameter Estimation
   8.1 Point Estimation
   8.2 Unbiased Estimators
   8.3 Interval Estimation: Confidence Intervals

9. Hypothesis Testing
   9.1 Null and Alternative Hypotheses
   9.2 Level of Significance
   9.3 Hypothesis Testing of Certain Parameters
   9.4 Power, Sample Size, and Operating Characteristic Curves

VIII. Suggested Texts

Hogg, R., and Tanis, E. (2009). *Probability and Statistical Inference* (8th edition). Prentice Hall.

Milton, S., and Arnold, J. (2002). *Introduction to Probability and Statistics*: *Principles and Applications for Engineering and Computing Science*s (4th edition). McGraw-Hill.

IX. Bibliography

Asimow, L., and Maxwell M. (2010). *Probability and Statistics with Applications: A Problem Solving Text*. ACTEX Publisher.

Bain, L., and Engelhardt, M. (2000). *Introduction to Probability and Mathematical Statistics* (2nd edition). Brooks Cole.

DeGroot, M., and Schervish, M. (2002). *Probability and Statistics* (3rd edition). Addison Wesley.

Ross, S. (2009). *Probability and Statistics for Engineers and Scientists* (4th edition). Academic Press.