SANTA MONICA COLLEGE
ACADEMIC
SENATE
1900 Pico Boulevard
Santa Monica, CA 90405
310.434.4611

CURRICULUM COMMITTEE ❙ AGENDA

Wednesday, May 21, 2014 ❙ 3:00 p.m.
Loft Conference Room – Drescher Hall 300-E

Members:

Guido Davis Del Piccolo, *Chair*	Ida Danzey	Randal Lawson	Estela Narrie
Georgia Lorenz, *Vice Chair*	Sandra Hutchinson	Helen LeDonne	James Pacchioli
Brenda Antrim	Maral Hyeler	Karen Legg	Elaine Roque
Teri Bernstein	Josh Kanin	Walt Louie	Jeffery Shimizu
Sang Chi	Hasun Khan	Kyle McGrath	David Shirinyan
	William Konya	Walter Meyer	Toni Trives

Interested Parties:

Jamey Anderson	Jonathan Cohanne	Mona Martin	Linda Sinclair
Maria Bonin	Kiersten Elliott	Steven Myrow	Madeleine Sundberg
Patricia Burson	Tina Fleming	Katharine Muller	Sal Veas
		Robin Ramsdell	Chris Young

Ex-Officio Members:

Eve Adler	Ty Moura

A G E N D A

(Items for action are listed alphabetically; items for information are listed numerically)

I. Call to order

II. Public Comments*

III. Approval of Minutes……...……3

IV. Chair's report:

V. Information items:

(Program Review – Course Updates)

1. ACCTG 1: Introduction to Financial Accounting
2. ACCTG 10A: Intermediate Accounting A
3. ACCTG 10B: Intermediate Accounting B
4. ACCTG 10C: Intermediate Accounting 10C
5. PHYS 3: Human Physiology

(Course Updates)

6. ECE 2: Principles And Practices Of Teaching Young
7. GEOL 4: Physical Geology with Laboratory
8. GEOL 5: Earth History
9. GIS/CIS/GEOG 20: Introduction To Geographic Information Systems
10. MATH 15: Ordinary Differential Equations

**Five minutes is allotted to any member of the public who wishes to address the Curriculum Committee on a specific agenda item, for general public comments, or non-agenda items.*

11. TH ART 2: Introduction To The Theatre
12. TH ART 26: Introduction to Stage Costuming

VI. Action items:

(Consent Agenda – Title Change)

a. DANCE 20: World Dance Survey (former title: Ethnic Dance)
b. Physics course name changes:

Physics #	Old Title	New Title
6	General Physics	General Physics 1 with Lab
7	General Physics	General Physics 2 with Lab
8	General Physics with Calculus	Calculus-based General Physics 1 with Lab
9	General Physics with Calculus	Calculus-based General Physics 2 with Lab

(New Courses)

c. ACCTG 9: Accounting Ethics……....7
d. BIOL 95C: Cell and Molecular Biology Research Methods……23
e. MEDIA 3/GLOBAL STUDIES 3: Global Media……....41

(Distance Education)

f. ACCTG 9: Accounting Ethics……..12

(Global Citizenship)

g. MEDIA 3/GLOBAL STUDIES 3: Global Media……....45

(New Programs)

h. Associate in Science for Transfer (AS-T), Nutrition……..47
i. Associate in Arts for Transfer (AS-T), Spanish……...48

(Revised Programs)

j. Associate in Science (AS), Accounting……49
k. Certificate of Achievement, Professional Accountant (reduction in units from 41 to 35)……50

(New Business)

l. Discussion on prerequisites data study (Institutional Research)……...51
m. Applying Universal Design to Creating and Choosing Digital Instructional Resources (Ellen Cutler)

VII. Adjournment

Please advise Guido Davis Del Piccolo (x. 3561), Georgia Lorenz (x. 4277) or Grace Smith (x. 4454) if you are unable to attend this meeting.

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CURRICULUM COMMITTEE | MINUTES

Wednesday, May 7, 2014 | 3:00 p.m.
Loft Conference Room – Drescher Hall 300-E

Members Present:

Guido Davis Del Piccolo, *Chair*	Sandra Hutchinson	Helen LeDonne	James Pacchioli
Georgia Lorenz, *Vice Chair*	Maral Hyeler	Karen Legg	Elaine Roque
Brenda Antrim	Josh Kanin	Walt Louie	Jeffery Shimizu
Teri Bernstein	William Konya	Walter Meyer	David Shirinyan
Sang Chi	Randal Lawson	Estela Narrie	Toni Trives

Members Absent:

Ida Danzey	Hasun Khan	Kyle McGrath

Others Present:

Eve Adler	Stuart Cooley	Josephine Hao
Suzanne Borghei	Vicki Drake	Rachel Petrocelli

M I N U T E S

(Items for action are listed alphabetically; items for information are listed numerically)

I. Call to order:
The meeting was called to order at 3:06pm.

II. Public Comments*:
None.

III. Approval of Minutes:
The minutes of April 2, 2014 were approved as presented.

IV. Chair's report:
- On April 8, 2014, the Academic Senate approved all the items approved by the Curriculum Committee on March 5, March 19 and April 2.

V. Information items:

(Course Updates)
1. BOTANY 1: General Botany
2. CHEM 11: General Chemistry I
3. CHEM 12: General Chemistry II
4. ENGR 12: Statics
5. ENGR 16: Dynamics
6. ESL 14A: Pronunciation And Spelling: Vowel And Consonant Sounds
7. ESL 14B: Pronunciation: Rhythm And Intonation
8. ESL 15: Conversation And Culture In The US
9. ESL 17: Intermediate Reading Skills

**Five minutes is allotted to any member of the public who wishes to address the Curriculum Committee on a specific agenda item, for general public comments, or non-agenda items.*

10. ESL 23: Academic Reading and Study Skills
11. ESL 28: Academic Vocabulary Skills
12. HIST 14: US Environmental History
13. HIST 25: History of East Asia Since 1600
14. HIST 32: Global Environmental History
15. HIST 34: World Civilizations II
16. HIST 39: History of Africa from 1900
17. PHYSCS 14: Introductory Physics With Laboratory
18. PHYSCS 24:Modern Physics With Lab
19. MCRBIO 1: Fundamentals Of Microbiology
20. NUTR 7: Food And Culture In America
21. ZOOL 5: Introductory Zoology

VI. Action items:

(Consent Agenda)

a. **COSM 11E: Curly Hair Techniques 1** *(renumbering COSM 14A to COSM 11E)* – presented by Helen LeDonne.

Motion made by: Walter Meyer **Seconded by:** Toni Trives
The motion passed unanimously.

b. **COSM 21E: Curly Hair Techniques 2** *(renumbering COSM 14B to COSM 21E. Addition of the prereq of COSM 11E)* – presented by Helen LeDonne.

Motion made by: Walter Meyer **Seconded by:** Sang Chi
The motion passed unanimously.

c. **COSM 31E: Curly Hair Techniques 3** *(renumbering COSM 24 to COSM 31E)* – presented by Helen LeDonne.

Motion made by: Walter Meyer **Seconded by:** Toni Trives
The motion passed unanimously.

d. **INTARC 29: Computer Skills for Interior Architectural Design** *(increase of units from 2 to 3)* – presented by Jo Hao.

Motion made by: Karen Legg **Seconded by:** Walt Louie
The motion passed unanimously.

e. **INTARC 28B: Visual Studies 2** *(renumbering INTARC 28 to INTARC 28B)* – presented by Jo Hao.

Motion made by: Brenda Antrim **Seconded by:** Estela Narrie
The motion passed unanimously.

(Consent Agenda – Title Change)

f. **PHYSCS 8: General Physics 1 With Calculus** *(Former title: General Physics With Calculus)*

Motion made by: Walter Meyer **Seconded by:** William Konya
The motion passed unanimously.

g. **PHYSCS 9: General Physics 2 With Calculus** *(Former title: General Physics With Calculus)*

Motion made by: Walter Meyer **Seconded by:** William Konya
The motion passed unanimously.

h. **PHYSCS 23: Fluids, Waves, Thermodynamics, Optics with *Lab*** *(Former title: Waves, Optics, Thermodynamics)*

Motion made by: Walter Meyer **Seconded by:** William Konya
The motion passed unanimously.

(New Courses)

i. **PV4: Photovoltaic Technical Sales –** presented by Stuart Cooley and Vicki Drake.

Approved with the following changes:
Edits made to course content, program applicability and skills advisory of PV-1 added.

Motion made by: Maral Hyeler **Seconded by:** Toni Trives
The motion passed unanimously.

(New Programs)

j. Associate in Arts for Transfer (AA-T), Anthropology

Motion made by: James Pacchioli **Seconded by:** Randy Lawson
The motion passed unanimously.

k. Associate in Arts for Transfer (AA-T), Economics

Motion made by: Teri Bernstein **Seconded by:** Brenda Antrim
The motion passed unanimously.

l. Associate in Science for Transfer (AS-T) Geology – presented by Vicki Drake.

Approved with the following changes:
Program description and Program Learning Outcomes to be updated.

Motion made by: David Shirinyan **Seconded by:** Helen LeDonne
The motion passed unanimously.

(Revised Programs)

m. Associate in Science & Certificate of Achievement, Interior Architectural Design - presented by Jo Hao.

Motion made by: Maral Hyeler **Seconded by:** Helen LeDonne
The motion passed unanimously.

(New DE)

n. NURSNG 60/HEALTH 60: Multicultural Health And Healing Practices – presented by Eve Adler.

Approved with the following changes:
Nursing 60 is degree applicable, and correction of minor typos in DE application

Motion made by: Randal Lawson **Seconded by:** Brenda Antrim
The motion passed unanimously.

***(Global Citizenship)* –** presented by Suzanne Borghei and Rachel Petrocelli

o. HIST 14: US Environmental History
p. HIST 25: History of East Asia Since 1600
q. HIST 32: Global Environmental History
r. HIST 34: World Civilizations II
s. HIST 39: History of Africa from 1900

Motion made by: Walter Meyer **Seconded by:** David Shirinyan
The motion passed unanimously.

VII. Adjournment:

The meeting was adjourned at 4:38pm.

Santa Monica College
New SMC Course
Expanded Course Outline for ACCTG 9 - Accounting Ethics

Course Cover	
Discipline	ACCTG-ACCOUNTING
Course Number	9
Full Course Title	Accounting Ethics
Catalog Course Description	This course surveys professional ethics for the accounting profession in the context of ethical theory, the history of ethical thought, the nature of accounting, tax and auditing fiduciary responsibilities, the rules of accounting codes of conduct, financial statement representations and fraud, and the theoretical and practical application of ethical principles to business situations. Topics include ethical standards specific to the accounting profession, an examination of the balance between the competing interests of the accountant's roles as management consultant and reporter of financial information to third parties, and the interests of businesses, government and professional regulatory agencies and the public. Reading, writing, analysis and discussion are core elements of the class.
Rationale	
Rationale	The California Board of Accountancy now requires a minimum of 10 semester units in Ethics, in response to SB 773. Our Professional Accounting Certificate program needs this course to maintain full coverage of accounting topics, and to maintain our success rates in passing the CPA exam. Its rigor and specificity can also be used by employers to train employees in this area, and for Continuing Education units for licensed CPAs.
Proposal Information	
Proposed Start	Year: 2014 Semester: Fall
Proposed for Distance Ed	Yes
Proposed for Global Citizenship	No
Course Unit/Hours	
Variable Hour Exist	NO
Credit Hours	Min: 3.00
Weekly Lecture Hours	Min: 3.00 (Sem: 54)
Weekly Laboratory Hours	Min:

Weekly Arranged Hours	Min:
Total Semester Instructional Hours	54.00
Load Factor	1.00
Load Factor Rationale	Course is lecture and discussion.
Repeatability	May be repeated 0 time(s)
Grading Methods	Letter Grade or P/NP
Transfer/General Ed	
Transferability	
Transfers to CSU	
Program Applicability	
Designation	Credit - Degree Applicable
Proposed For	**AS Degree** -AS degree in Accounting **Certificate of Achievement** -Professional Accounting Certificate
Pre/Corequisites & Advisories	
Skills Advisory ACCTG 1 success in this course will require learning basic accounting concepts, or having mastered them in another course or **Skills Advisory** ACCTG 21 success in this course will require learning basic accounting concepts, or having mastered them in another course	
Course Objectives	
Upon satisfactory completion of the course, students will be able to:	
1. Articulate an ethical frame of reference based on established ethical theories for analyzing moral dilemmas and ethical conflicts.	
2. Describe governmental and professional ethical standards and codes that pertain to accounting and business decision-making, in particular the AICPA Code of Conduct and IRS Circular 230.	
3. Identify and analyze the pros and cons of multiple courses of action when confronted with an ethical dilemma, at both the individual employee and corporate policy levels.	
4. Describe and analyze how the issue of "fair value" in accounting is impacted by ethical standards, and how other "principles-based" measures and "rule-based" measures may give	

rise to different ethical considerations.
5. Describe the attributes and impacts on ethical decision-making of the following legislation: 1934 Securities Act (especially Section 10(b) and Rule 10b-5), Sarbanes-Oxley, the PCAOB, the Foreign Corrupt Practices Act, and the Racketeer Influenced Corrupt Organizations Act.
6. Differentiate between ethical and legal standards of behavior, and apply the understanding to case studies in business situations.
7. Describe how managerial accounting situations are affected by ethical issues differently than financial accounting situations.
8. Address how the following human resource-related legislation impacts accounting ethical dilemmas: the Civil Rights Act, Americans with Disabilities Act, Age Discrimination in Employment Act, ERISA, the Fair Labor Standards Act.
9. Identify and analyze current events involving corporations with respect to underlying ethical issues.
10. Identify issues relating to integrity, objectivity, form and substance, independence and the appearance of independence, and the role of accountants in monitoring ethical behavior in business situations.

Course Content	
10%	Ethical frameworks for decision-making, e.g. Kohlberg's Stages of Moral Development
10%	History of accounting ethical standards from Luca Pacioli (1494) through the AICPA Code of Conduct and IRS Circular 230
25%	Critical thinking processes for identifying and resolving ethical dilemmas (from managerial, subordinate and corporate perspectives), including identification of multiple courses of action and the possible consequences of each.
15%	Legislation affecting ethical decision-making in business situations: 1933 Securities Act,1934 Securities Act, Sarbanes-Oxley, the PCAOB, the Foreign Corrupt Practices Act, and the Racketeer Influenced Corrupt Organizations Act (RICO); also Deceptive Business Practices Act (Texas).
10%	View and analyze films (and/or read books) focusing on ethical failures in modern corporate situations, particularly related to financial crises.
10%	Ordinary negligence, gross negligence and fraud.
10%	Violations of accounting principles; full disclosure; misrepresentations on financial statements and tax returns; common complaints against CPAs.
10%	The accountant's role in monitoring ethical conduct in business situations:Integrity, objectivity, form vs. substance, independence vs. the appearance of independence.
Total: 100%	

Methods of Presentation	
Opt Heading	
Methods	Group Work Lecture and Discussion
Other Methods	

Methods of Evaluation	
Methods	• 30% - Class Participation Classwork analysis of business situations involving ethical issues • 30% - Exams/Tests essay portion 60%; recall 40% 3 exams per course • 20% - Group Projects Case studies (papers) involving corporate ethical lapses • 20% - Papers book reports, current events, short analysis of ethical situations and film critiques • 100% - Total

Appropriate Textbooks	
Textbooks such as the following are appropriate:	
Formatting Style	APA
Textbooks	
1. Duska, Ronald, Brenda Shay Duska and Julie Ann Ragatz. . *Accounting Ethics*, 2nd edition ed. Wiley-Blackwell, 2011, ISBN: 1405196130.	
Manuals	
1. Kohlberg, Lawrence and Cherry, Kendra. Moral Stages of Development, http://psychology.about.com/od/developmentalpsychology/a/kohlberg.htm, 12-31-2013	
2. AICPA. Code of Professional Conduct, http://www.aicpa.org/research/standards/codeofconduct/pages/default.aspx, 10-31-2013	
3. IRS.gov. Circular 230, http://www.irs.gov/pub/irs-utl/pcir230.pdf, 06-03-2011	
Other	
1. Margin Call (film, 2011): Investment bank during a financial and ethical crisis. http://www.imdb.com/title/tt1615147/ Enron: The Smartest Guys in the Room (film, 2005) financial corruption at a major corporation. http://www.imdb.com/title/tt1016268/?ref_=nv_sr_1 Too Big to Fail (TV film, 2011) financial crisis of 2008. http://www.imdb.com/title/tt1742683/?ref_=nm_flmg_act_10	

Assignments
Sample Assignment
Short Accounting Ethics Exercise 25 points **Required:** Write a paragraph or two, describing a business situation in which there is an ethical dilemma. This should be something that you experienced or witnessed, or it should be a business situation linked to a current event article online.

Then, in bullet points:
Show at least 3 alternative courses of action
and…for each course of action, show at least one positive outcome and one negative outcome.

I am providing an example, but if you use the example to paraphrase or copy, the highest grade you can receive is 15/25. Please "think out of the box" and consider all issues that may arise.

Example:

I was working in a family owned bakery on a Sunday with another co-worker; no family members were present. My co-worker gave her friends about $15 worth of bakery goods with no payment received. This action was contrary to company policy, and was tantamount to a theft of company property.

Courses of Action:

1. Confront the co-worker, and tell him that giving away merchandise is against company policy

- pro: boss may appreciate this; it is following rules
- con: co-worker might feel uncomfortable or retaliate

2. Do nothing.

- pro: no conflict with co-worker
- con: Boss may notice theft and blame me instead of the co-worker
- con: I might feel guilty and be hyper-vigilant around the co-worker

3. Tell the boss

- pro: boss will trust me
- con: co-worker might lose their job
- con: co-worker will think I was a tattle-tale and might take action against me.

Student Learning Outcomes
1. The student will be able to recognize and identify ethical components as factors in every business and accounting decision, and will be able to describe the ethical dilemmas present.
2. The student will be able to apply ethical frameworks--both philosophical and delineated in legal and professional codes of conduct--to ethical decision making and identify multiple courses of action and the possible consequences of each.
3. The student will be able to demonstrate a level of engagement in the subject matter that reveals their understanding of the value of the course content beyond the task itself,

specifically as it relates to linking the relevance of course content to careers in business and accounting and their personal lives.	
Minimum Qualification	
Minimum Qualifications:	Accounting (Masters Required)
Library	
List of suggested materials has been given to librarian?	Yes
Library has adequate materials to support course?	No
Additional Comments/Information	
Distance Ed **Distance Education Application**	
Delivery Methods	Online/Web-based Online Hybrid (51% or more of course is held on-campus)
Need/Justification	
Distance Education Quality	
Quality Assurance	Course objectives have not changed Course content has not changed Method of instruction meets the same standard of course quality Outside assignments meet the same standard of course quality Serves comparable number of students per section as a traditional course in the same department Required texts meet the same standard of course quality
Additional Considerations	Evaluation methods are in place to produce an annual report to the Board of Trustee on activity in offering this course or section following the guidelines to Title 5 Section 55317 (see attachment) and to review the impact of distance education on this program through the program review process specified in accreditation standard 2B.2. Determination and judgments about the equality of the distance education course were made with the full involvement of the faculty as defined by Administrative Regulation 5420 and college curriculum approval procedures. Adequate technology resources exist to support this course/section Library resources are accessible to students Specific expectations are set for students with respect to a minimum amount of time per week for student and homework assignments Adequately fulfills ?effective contact between faculty member and student? required by Title 5. Will not affect existing or potential articulation with other colleges

	Special needs (i.e., texts, materials, etc.) are reasonable Complies with current access guidelines for students with disabilities
Guidelines and Questions for Curriculum Approval of a Distance Education Course Student Interactions	
Student-Instructor Interaction	Instructional materials prepared by instructor are available asynchronously 24/7. Weekly reading assignments and threaded discussion questions are required. Discussion threads are graded. Short weekly written assignments are required and graded
Student-Student Interaction	Multiple question topics per week in threaded discussions require reading and responding to other student's comment. Case studies with group responses are required on a bi-weekly basis.
Student-Content Interaction	Students must read content items posted in Doc Sharing and experience the power point lectures and videos posted. 12 power point lectures and a minimum of 3 videos or films will be linked to the course.

Online class activities that promote class interaction and engagement	**Brief Description**	**Percentage of Online Course Hours**
Chat Rooms	Available to students to work on Case Studies; not graded.	5%
Discussion Boards	Multiple business situations will be posted each week where students will identify ethical issues and suggest multiple courses of action and the pros and cons of each. Also, questions arising from the readings will be posted, requiring student responses. Graded weekly.	35%
Online Lecture	PowerPoint lectures and short video lectures will be required covering the majority of course content.	25%
Videos	links to movies or TV movies will be provided.	10%
Exams	Exams will be a combination of essay (about 60%) and recall of theory or facts (40%). 3 exams	15%
Written assignments	Case studies papers done by groups will be uploaded; comments will be required from other students.	10%

Describe how content will be organized and delivered in the interest of achieving course outcomes/objectives (e.g. what are the methods of instruction being used, technologies used, approximate time schedule, necessary instructional materials.)

Course content items will include:
--Powerpoint lecture covering content
--Reading material assigned (internet & .pdf primarily, links posted in course and in Doc

Sharing) --Questions posted on discussion threads, (graded weekly) --Case study papers (two per course, in group work) --"self-test" quizzes, not for credit (available weekly) --Three exams
Describe the technical qualifications an instructor would need and the support that might be necessary for this course to be delivered at a distance (e.g. the college's existing technology, CCCConfer certification, other specialized instructor training, support personnel, materials and resources, technical support, etc.)
Instructor needs to have been trained, or have practical experience with the course management system in place (currently eCollege). Skills required include use of pooled test questions, uploading of documents, set-up of grade book, management of dates and discussion threads, creation of Powerpoint lectures, and understanding of ADA compliance issues.
Describe any student support services one might want or need to integrate into the online classroom for this course (e.g. links to counseling, financial aid, bookstore, library, etc.)
Students need to have access to a computer with a robust internet connection that meets the technology requirements that can be assessed at www.smconline.org. Students also need to be aware that this course requires a substantial amount of writing, but that writing instruction is not part of the course content.
Describe how the design of the course will ensure access for students with disabilities including compliance with the regulations of Section 508 of the Rehabilitation Act.
Course materials are instructor-developed, so issues with publisher materials not being in compliance with accessibility standards is not an issue. Materials are developed in Microsoft Office programs. .pdf files will be evaluated for accessibility before being uploaded or required. Only films with available closed captioned technology will be assigned.
Using one of the course objectives, describe an online lesson/activity that might be used in the course to facilitate student learning of that objective. Be sure the sample lesson/activity includes reference to the use of online teaching tools (such as drop box or threaded discussion, or multimedia such as Articulate, Flash, Jing, etc.).
Online teaching tool: threaded discussion Course Objective #3: Identify and analyze the pros and cons of multiple courses of action when confronted with an ethical dilemma, at both the individual employee and corporate policy levels. Discussion thread question: Two non-family member employees are working in a family owned bakery on a Sunday; no family members are present. One of the workers gives her friends about $45 worth of

bakery goods with no payment received. This action is contrary to stated company policy. Describe courses of action that the other worker might take in response to witnessing this situation, and at least one positive and one negative possible consequence of taking that action. In thinking of possible courses of action, imagine varied financial circumstances (from poverty to wealth) of all parties involved.

Discussion thread follow-up question:

Identify the possible effects on the financial statements of each identified course of action.

Assessment Best Practices

30%-**Exams** - Essay (10%) and recall/theory/history (90%). 3 exams per course. (the rest of the course is writing, so essay portion is less on exams)
30%-**Discussion threads** - Graded using a rubric based on original content, relevance to content item and timeliness of post
20%-**Short papers/short-answer assignments** - These will be based on current events involving ethical issues and exercises to solidify understanding of concepts. 4 short assignments per course
20%-**Case studies (group work)** - Paper will be prepared by group researching corporate ethical lapse and identifying ways that the lapse might have been prevented, as well as the other courses of action open to the participants at the time.

Attached Files

Advisory/prereq Acct 1
Advisory/prereq Acct 21
Accounting Ethics reference list

Prerequisite / Corequisite Checklist and Worksheet

(Accounting 9)

Advisory: Accounting 1; Introduction to Financial Accounting

Other prerequisites, corequisites, and advisories also required for this course:
(Please note that a separate sheet is required for each prerequisite, corequisite, or advisory)

OR Accounting 21: Business Bookkeeping

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:

In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

Type 1: Standard Prerequisite (required prerequisite at UC or CSU)

Identify three UC or CSU campuses that offer the equivalent course with the equivalent prerequisite.

List schools here:
CSU Chico (Acct 558) one Accounting Course
UC Berkeley (BUS Adm X 420.6) Intermediate Acctg 1 or 2
UCLA Extt (MGMT X 423.422) Advisory: completion of accounting core course recommended

modified 09/26/2012

Complete the Prerequisite Worksheet

___ Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)

Complete the Prerequisite Worksheet

___ Type 3: Course in communication or computational skills as prerequisite for course other than another skills course (e.g., English 1 prerequisite for Anatomy 1)

Complete the Prerequisite Worksheet

Complete Data Analysis

___ Type 4: Program prerequisites

Prerequisite must be required for at least one of the courses in the program. Explain:

___ Type 5: Health and Safety

Students who lack the prerequisite might endanger themselves, other students or staff. Explain:

___ Type 6: Recency and other measures of readiness (miscellaneous)

Data must be collected according to sound research principles in order to justify such prerequisites.

Complete the Prerequisite Worksheet

Prerequisite Worksheet

ENTRANCE SKILLS FOR **(ACCT 9)**

(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Ability to distinguish between accrual basis and cash basis accounting and apply accounting principles
B)	Ability to prepare financial statements.
C)	Understand and complete the accounting cycle.
D)	Understand the basic concept of internal control in accounting systems.

EXIT SKILLS (objectives) FOR **(ACCT 1)**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Describe the nature and purpose of generally accepted accounting principles (GAAP) and international rules, such as International Financial Reporting Standards (IFRS); **explain the conceptual framework for financial accounting and reporting, including basic principles of financial accounting, the assumptions underlying these principles**, how accounting principles were developed and the constraints and limitations on accounting information.
2.	Define, use and understand accounting and business terminology, and apply it to transactions, reporting and analysis.
3.	Apply transaction analysis, input transactions into the accounting system using journal entries, post and summarize this input, **prepare and interpret the Income Statement, the Statement of Owner's Equity and the Balance Sheet**, and **complete the accounting cycle** through the beginning of the following fiscal year.
4.	**Distinguish between cash basis and accrual basis accounting and the principles underlying these approaches (matching principle, revenue recognition principle);** explain the impact of each approach on the financial statements.
5.	Distinguish the activities of a service business from those of a merchandising business; journalize the entries for merchandising transactions; prepare a chart of accounts and an income statement for a merchandising business; describe the accounting cycle for a merchandising business.
6.	**Identify and explain how the principles of internal control are used to minimize risk, protect business assets, and enhance accounting integrity;** apply the principles of internal control to the accounting for cash, receivables, inventory, and plant assets.
7.	Describe and explain the content, form and purpose of the basic financial statements, including the notes to the financial statements and the components of an annual report; describe how they satisfy the information needs of various users: investors, creditors, government bodies, directors, managers and other users.
8.	Describe, explain and apply principles relating to current assets (cash and cash equivalents, receivables and bad debts, marketable securities, inventory and cost of goods sold, and prepaid expenses), including measurement, recording, changes in valuation, adjustments, errors, and reporting.
9.	Identify and illustrate issues and transactions relating to long-term assets including acquisition, valuation, use, cost allocation, depreciation, disposal and reporting.
10.	Distinguish between capital and revenue expenditures and demonstrate the recording and reporting of each.
11.	Define and give examples of current liabilities and long term liabilities; journalize and explain the valuation and reporting of all current liabilities, including notes and payroll accounts; explain the valuation and reporting of estimated liabilities and other contingencies.

modified 09/26/2012

12.	Describe the characteristics and advantages and disadvantages of the partnership form of business organization; journalize partnership entries
13.	Describe the importance of business ethics, the basic principles of proper ethical conduct, and the practical application of ethical principles to various reporting issues and business situations
14.	Describe and compute various managerial ratios and concepts related to service and merchandizing businesses in the current global economic environment including liquidity, solvency, profitability and market prospect ratios, as well as whole-statement analysis.

	ENTRANCE SKILLS FOR (ACCT 9)								
EXIT SKILLS FOR (ACCT 1)		A	B	C	D	E	F	G	H
	1	X							
	2								
	3		X	X					
	4	X							
	5								
	6				X				
	7								
	8								
	9								
	10								
	11								
	12								
	13								
	14								

Prerequisite / Corequisite Checklist and Worksheet

(Accounting 9)

Advisory: Accounting 21; Accounting for Small Business (Business bookkeeping)

Other prerequisites, corequisites, and advisories also required for this course:
(Please note that a separate sheet is required for each prerequisite, corequisite, or advisory)

OR Accounting 1: Introduction to Accounting

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:

In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

Type 1: Standard Prerequisite (required prerequisite at UC or CSU)

Identify three UC or CSU campuses that offer the equivalent course with the equivalent prerequisite.

List schools here:
CSU Chico (Acct 558) one upper division Accounting Course
UC Berkeley (BUS Adm X 420.6) Intermediate Acctg 1 or 2
UCLA Extt (MGMT X 423.422) Advisory: completion of accounting core course recommended

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Complete the Prerequisite Worksheet

___ Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)

Complete the Prerequisite Worksheet

___ Type 3: Course in communication or computational skills as prerequisite for course other than another skills course (e.g., English 1 prerequisite for Anatomy 1)

Complete the Prerequisite Worksheet

Complete Data Analysis

___ Type 4: Program prerequisites

Prerequisite must be required for at least one of the courses in the program. Explain:

___ Type 5: Health and Safety

Students who lack the prerequisite might endanger themselves, other students or staff. Explain:

Type 6: Recency and other measures of readiness (miscellaneous)

___ **Data must be collected according to sound research principles in order to justify such prerequisites.**

Complete the Prerequisite Worksheet

Prerequisite Worksheet

ENTRANCE SKILLS FOR **(ACCT 9)**

(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Ability to distinguish between accrual basis and cash basis accounting and apply accounting principles
B)	Ability to prepare financial statements.
C)	Understand and complete the accounting cycle.
D)	Understand the basic concept of internal control in accounting systems.

EXIT SKILLS (objectives) FOR **(ACCT 21)**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	**Apply accounting concepts and principles to describe an organization's financial position and prepare and use financial statements**.
2.	Define and use key accounting terms to analyze and journalize transactions, post the corresponding journal entries to the ledger, and prepare a trial balance
3.	**Distinguish between accrual basis and cash basis accounting and apply the revenue recognition and matching principles**
4.	Record adjusting entries at the end of the accounting period, prepare an adjusted trial balance, and **prepare financial statements** from the adjusted trial balance
5.	Prepare an accounting worksheet, close temporary accounts, and **complete the accounting cycle.**
6.	Prepare special journals (sales, cash receipts, purchases, and cash payments journals) and subsidiary ledgers (accounts receivable and accounts payable).
7.	**Apply internal controls** to the receipt and payment of cash. Prepare bank reconciliations and the related journal entries.
8.	Compute and record employee payroll and corresponding employer payroll tax journal entries

.

	ENTRANCE SKILLS FOR (ACCT 9)								
EXIT SKILLS FOR (ACCT 21)		A	B	C	D	E	F	G	H
	1	X	X						
	2								
	3	X							
	4		X						
	5			X					
	6								
	7				X				
	8								

modified 09/26/2012

Santa Monica College
New SMC Course
Expanded Course Outline for BIOL 95C - Cell and Molecular Biology Research Methods

Course Cover	
Discipline	BIOL-BIOLOGY
Course Number	95C
Full Course Title	Cell and Molecular Biology Research Methods
Catalog Course Description	This course utilizes techniques of biochemistry and cellular and molecular biology to explore the actions of cellular proteins participating in pathways that are critical to the functioning of living organisms. Students examine the roles of a single vital protein or pathway. Through a survey of the scientific literature, students formulate hypotheses and determine appropriate methods for testing predictions. Students collect data, apply statistical methods, engage in comprehensive data interpretation, utilize computer-aided computational analyses of protein structure and searches of bioinformatics databases to evaluate experimental results, and generate new hypotheses. Comparisons between the normal function of the protein or pathway and the possible outcomes of dysfunctions are emphasized. Students report their findings in the format of a scientific journal article.
Rationale	
Rationale	This course will prepare students for research opportunities in university laboratories as part of the SMC/UCLA Science and Research Initiative. While participating in an original investigation, students will gain hands-on experience with research-grade equipment used to study the activities of cellular components.
Proposal Information	
Proposed Start	Year: 2014 Semester: Fall
Proposed for Distance Ed	No
Proposed for Global Citizenship	No
Course Unit/Hours	
Variable Hour Exist	NO
Credit Hours	Min: 2.00
Weekly Lecture Hours	Min: 1.00 (Sem: 18)

Weekly Laboratory Hours	Min: 4.00 (Sem: 72)
Weekly Arranged Hours	Min:
Total Semester Instructional Hours	90.00
Load Factor	1.00
Load Factor Rationale	Load factor is consistent with the lecture and laboratory components of existing courses taught within the Life Sciences.
Repeatability	May be repeated 0 time(s)
Grading Methods	Letter Grade or P/NP

Transfer/General Ed

Transferability

Transfers to UC (pending review)
Transfers to CSU

IGETC Area:

Does NOT satisfy any area of IGETC:

CSU GE Area:

(pending review)

- CSU GE Area B: Scientific Inquiry and Quantitative Reasoning (mark all that apply)
  - B2 - Life Science
  - B3 - Laboratory Sciences

SMC GE Area:

- GENERAL EDUCATION PATTERN (SMC GE)
  - Area I: Natural Science

Comparable Transfer Courses:

- **UC**
  UC Los Angeles
  Introduction to Laboratory & Scientific Methodology LS23L

Program Applicability

Designation	Credit - Degree Applicable
Proposed For	**AA Degree** -General Science

Pre/Corequisites & Advisories
Prerequisite SCI 10 or **Prerequisite** BIOL 21 **Skills Advisory** Eligibility for English 1

Content Review
SCI 10 - Prerequisite (Content to Objective) BIOL 21 - Prerequisite (Content to Objective) ENGL 21B - Skills Advisory (Content to Objective)

Course Objectives
Upon satisfactory completion of the course, students will be able to:
1. Identify critical problems in cellular and organismal physiology related to the functioning of proteins and pathways.
2. Perform literature searches to ascertain the background and testing methodology for original research questions.
3. Generate testable hypotheses for a series of related experiments to test predictions regarding cellular processes.
4. Design experimental protocols to examine formulated hypotheses.
5. Perform sophisticated and advanced cellular and molecular biology techniques to test hypotheses.
6. Utilize computational modeling and bioinformatics analyses to identify structural elements essential for the cellular functions of proteins.
7. Analyze and interpret data obtained from experiments in cellular and molecular biology.
8. Prepare scientific manuscripts to communicate original research results.

Course Content	
5%	Functions of Cellular Proteins: Structural Components, Signal Transduction, Metabolism and Regulation
5%	Methods in Cell Biology: Cell Culturing, Cell Fractionation, Microscopy
5%	Methods for Protein Detection: Western Blotting, Fluorescence Microscopy
5%	Methods in Molecular Biology: Gel Electrophoresis, Quantitative Polymerase Chain Reaction
10%	Cellular Physiology of the Model System
10%	Using Scientific Literature to Inform Research Question and Methods Selections
10%	Generating Hypotheses For a Related Series of Experiments
15%	Experimental Design

15%	Statistical Analysis of Data
10%	Data Interpretation
10%	Presenting Original Research Results
Total: 100%	

Lab Content	
5%	Cell Culturing, including transfection of mammalian cells to change levels of protein expression, if applicable
5%	Cell Fractionation Techniques
5%	Fluorescence Microscopy to Study Protein Localization and Targeting
5%	Western Blot analysis to determine the presence and quantity of proteins
5%	Real-Time Polymerase Chain Reaction to Study Gene Expression for Protein Production
5%	Proper Use of Research-Grade Instrumentation
5%	Laboratory Safety
5%	Preparing Reagents for Experimentation
20%	Collection of Data to Test a Series of Related Hypotheses
10%	Computer Modeling of Protein Structure and Bioinformatics Analyses
15%	Statistical Analyses of Data
15%	Data Interpretation
Total: 100%	

Methods of Presentation	
Opt Heading	
Methods	Experiments Group Work Lab Lecture and Discussion
Other Methods	Student groups will complete an original laboratory research project focused on elucidating the function of a critical cellular protein or pathway. Each semester, the instructor will choose a model system that can be used to generate original research questions contrasting the effects of proper and altered functioning of proteins on the physiology and pathophysiology of cell systems and the whole organism. During the first offering of the course, the functions of the Na+-K+-ATPase, a ubiquitous protein responsible for several vital functions of cells, will be considered. Students will propose hypotheses, design protocols, and collect, analyze and interpret data for a series of related cellular and molecular biology experiments. Computer-aided investigations of protein structure and bioinformatics analyses will be emphasized to aid in examination of the hypotheses.

Methods of Evaluation	
Methods	• 5% - Class Participation

	• 10% - Group Projects Generating Research Question and Hypotheses • 25% - Lab Reports Data Analysis and Interpretation • 10% - Oral Presentation Presenting research findings • 20% - Research Projects Review of Scientific Literature Designing Experimental Protocols • 10% - Simulation Presenting results of computer modeling of protein structure and bioinformatics correlations • 20% - Written assignments Original Research Article • 100% - Total

Appropriate Textbooks

Textbooks such as the following are appropriate:

Formatting Style	APA

Textbooks

1. Karp, G. *Cell and Molecular Biology: Concepts and Experiments*, 7 ed. Wiley, 2013, ISBN: 1118206738.

2. Wilson, K. and J. Walker . *Principles and Techniques of Biochemistry and Molecular Biology*, 7 ed. Cambridge University Press, 2010, ISBN: 0521731674.

Other

1. Primary Research Articles from the Biological Literature will be assigned. These will be updated each semester to correspond to the selected protein or pathway and to retain recency. Online databases will be used to access the articles. Examples include:
A. Geering, K. (2008). Functional roles of Na, K-ATPase subunits. Current Opinion In Nephrology And Hypertension, 17 (5), pp. 526--532.
B. Rajasekaran, S. A., Barwe, S. P. & Rajasekaran, A. K. (2005). Multiple functions of Na, K-ATPase in epithelial cells. Seminars in Nephrology, 25 (5), pp. 328--334.
C. Toyoshima, C. & Cornelius, F. (2013). New crystal structures of PII-type ATPases: excitement continues. Current Opinion In Structural Biology, 23 (4), pp. 507--514.
D. Vagin, O., Dada, L., Tokhtaeva, E. & Sachs, G. (2014). The Na-K-ATPase alpha1, beta1 heterodimer as a cell adhesion molecule in epithelia. American Journal Physiology Cell Physiology, 302 (9), pp. C1271-81.

Assignments

Sample Assignment

Assignment 1
Research Proposal: Identification of a Research Question and Selection of Appropriate Experimental Protocols

In this assignment, you will present a research question focusing on the cellular protein

that has been selected as the subject of experimentation this semester. Your question should be a way of probing the normal activity of this protein within the cell. In addition, you will propose specific experimental protocols for testing this research question. Include the following elements in your research proposal.

1. Background
In this section, describe what is currently known about the protein chosen for study this semester. Include information about its structure, location, and known aspects of its function and interactions with other cellular components. Describe where the protein is found in the cell and which cells of the organism use this protein. Include any examples of the effects of mutations that cause changes in the protein's structure. As the foundation for the research question given in the next section, identify aspects of this protein's function that still need to be elucidated. Provide citations for the literature you consulted to obtain the information presented.

2. Research Question
In this section, formulate an original research question based on an unknown aspect of this protein's function. This question should be broadly constructed so that a variety of experiments can be designed to test it.

3. Hypothesis
In this section, formulate at least one hypothesis to study the function of the chosen protein. The hypothesis must be related to the overall research question and will identify a more specific aspect of the question to be tested. Measurable variables must be included in the hypothesis. If possible, predict which mathematical relationship would exist between the variables.

4. Proposed Protocols
In this section, identify three experimental approaches to test the hypothesis. Provide citations for appropriate protocols found in the scientific literature. Select the most feasible approach and outline a specific experiment that can be conducted. Identify the type of data that will be collected and the applicable method for data analysis. Give a rationale to support your choice of experiment.

Assignment 2
Generating a Scientific Journal Article to Summarize Original Research Results

Based on the experiments you conducted, formulate a journal article containing the following elements.

1. Title
The title of a research paper succinctly identifies the purpose and/or outcomes of the experiment(s), along with the experimental subject. Typically, titles do not contain a verb.

2. Abstract

An Abstract is a one-paragraph summary of the research that identifies the question that has been studied or hypothesis that has been tested, provides a short description of the methods for the experiments, summarizes the results of the experiments and presents conclusions drawn from the results. Note that the Abstract should be a way of integrating all parts of the experimental work and data interpretation to describe the "big picture" of the study.

3. Introduction
An Introduction provides the background needed to understand the basis for the study and the focus of the experimental approach. This section summarizes and cites the relevant scientific literature to describe the existing knowledge in the field, and also identifies how the current experiments will add to further understanding. The information presented in this section will lead to the statement of the hypothesis that will be tested.

4. Materials and Methods
A Materials and Methods section describes what was used in the experiments and how the experiments were conducted. It is written in past tense and in paragraph form, rather than a list of steps. The overall goal is to describe the experiments in sufficient detail so that another scientist can replicate your methods from your description alone. A related goal is to be concise, so only information that is specific to the given experiments should be included. Specification of the materials should be included as they are mentioned in the description of the methods. This section should be written in paragraph form and in the past tense to show that the experiment has already been completed, rather than as a list of instructions to follow.

5. Results

The experimental data is presented in a Results section. Describe how you have chosen to present the data by introducing any tables and figures, as well as identifying what the reader should notice about the data. Tables and figures should each have a clear and succinct caption. Data presented in this section will represent a summary of the collected results, organized to best portray the outcomes of the experiments.

6. Discussion
The experimental outcomes are interpreted in a Discussion section. Generally, the meaning of the results presented in each of the tables and figures is addressed. The significance of the results and what they add to knowledge in the field is identified. How well the data fit the proposed hypothesis is also described. Future experiments are often identified.

7. Conclusion
A Conclusion section summarizes the data analysis and results that have been presented in the article. It is typically a few sentences long and emphasizes the main points: whether the hypothesis was supported and why or why not, any relationships observed, and/or future experiments proposed.

8. References
The References section should include any articles cited in your article (typically from the Introduction).

9. Acknowledgements
The Acknowledgement section is used to thank the people and institutions that have assisted you with your research and made it possible for you to conduct your experiments. This includes collaborators, lab assistants or collection managers, mentors, and funding sources.

Student Learning Outcomes
1. Formulate an original research question related to the proper functioning of cellular proteins and biological pathways.
2. Design a series of related experiments to elucidate the roles of cellular proteins.
3. Collect, analyze, and interpret data collected through experimentation with cellular and molecular biology methods.
4. Perform computer-aided investigations of protein structure and function relationships.
5. Integrate data analysis and interpretation into a scientific research article.
6. Evaluate results from their own experiments and other studies to assess progress in understanding cellular processes.

Minimum Qualification	
Minimum Qualifications:	Biological Sciences (Masters Required)

Library	
List of suggested materials has been given to librarian?	No
Library has adequate materials to support course?	Yes

Additional Comments/Information
Library Online Databases provide adequate access to original research articles to support this course.

Attached Files
Biol 21 Prerequisite Worksheet Eng 21B Advisory Worksheet SCI 10 Prerequisite Worksheet

Prerequisite / Corequisite Checklist and Worksheet

Biology 95C

Prerequisite: Biology 21; Cell Biology and Evolution OR
Science 10; Principles and Practice of Scientific Research (covered on a separate worksheet)

Other prerequisites, corequisites, and advisories also required for this course:
(Please note that a separate sheet is required for each prerequisite, corequisite, or advisory)

Advisory: English 21B (Eligibility for English 1): English Fundamentals 2

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:

In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

___ Type 1: Standard Prerequisite (required prerequisite at UC or CSU)
Identify three UC or CSU campuses that offer the equivalent course with the equivalent prerequisite.
List schools here:
Complete the Prerequisite Worksheet

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet
Biology 21 provides opportunities for scientific literature review, hypothesis formulation, experimental design, and data collection and analysis at an introductory level, giving a foundation for the more advanced skills to be emphasized in Biology 95C.

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Type 3: Course in communication or computational skills as prerequisite for course other than another skills course (e.g., English 1 prerequisite for Anatomy 1)

___ **Complete the Prerequisite Worksheet**

Complete Data Analysis

Type 4: Program prerequisites

___ **Prerequisite must be required for at least one of the courses in the program. Explain:**

Type 5: Health and Safety

X **Students who lack the prerequisite might endanger themselves, other students or staff. Explain:**

Students will need to follow laboratory safety procedures practiced in Biology 21 when completing the research project in Biology 95C.

Type 6: Recency and other measures of readiness (miscellaneous)

___ **Data must be collected according to sound research principles in order to justify such prerequisites.**

Complete the Prerequisite Worksheet

Prerequisite Worksheet

ENTRANCE SKILLS FOR **Biology 95C**

(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Extract information from the scientific literature that is pertinent to formulating research questions and experimental design.
B)	Propose hypotheses that can be tested by cellular and molecular biology methods.
C)	Design and conduct experiments that will effectively test a scientific hypothesis.
D)	Collect scientific data with safety and accuracy.
E)	Recognize and utilize statistical methods applicable to specific data sets.
F)	Relate data interpretation to existing knowledge presented in scientific literature.
G)	Communicate research findings in conventional scientific formats.

EXIT SKILLS (objectives) FOR **Biology 21**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Use the scientific method in designing experiments and collecting, analyzing and interpreting original data.
2.	Demonstrate knowledge and ability to master a number of basic biology laboratory techniques.
3.	Calibrate, use and care for a number of common scientific tools, instruments and procedures including compound light microscopes.
4.	Use computer applications to manage and graph data.
5.	Locate and evaluate primary and secondary sources of scientific information from library and Internet databases. Write abstracts summarizing major elements of full-length scientific publications.
6.	Write scientific lab reports based on a standard format used in scientific publications.
7.	Identify multiple lines of evidence to support the theory of evolution.
8.	Describe and solve problems in the mechanisms of evolution.
9.	Describe the elements of cell structure and function, and compare and contrast characteristics of different types of cells.
10.	Describe cell processes such as membrane recognition and transport, cell communication, energy metabolism, and biosynthesis, including showing an understanding of the underlying chemistry.
11.	Compare and contrast asexual and sexual reproduction and development as illustrated in protist, plant and animal life cycles.
12.	Demonstrate significant independent learning skills.
13.	Synthesize an integrated view of the biology studied.
14.	Demonstrate a level of detail and sophistication in biological knowledge appropriate for students planning to continue the study of biology.

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	ENTRANCE SKILLS FOR Biology 95C							
EXIT SKILLS FOR (Biology 21)		A	B	C	D	E	F	G
	1		X	X	X	X	X	X
	2			X	X			
	3			X	X			
	4					X		
	5	X						
	6						X	X
	7							
	8							
	9		X					
	10		X					
	11							
	12							
	13							
	14	X	X	X	X	X	X	X

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Prerequisite / Corequisite Checklist and Worksheet

Biology 95C
Advisory: English 21B (Eligibility for English 1); English Fundamentals 2
Other prerequisites, corequisites, and advisories also required for this course: (Please note that a separate sheet is required for each prerequisite, corequisite, or advisory)
Prerequisite: Science 10; Principles and Practice of Scientific Research OR
Prerequisite: Biology 21; Cell Biology and Evolution

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:

In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

Type 1: Standard Prerequisite (required prerequisite at UC or CSU)

___ Identify three UC or CSU campuses that offer the equivalent course with the equivalent prerequisite.

List schools here:

Complete the Prerequisite Worksheet

modified 09/26/2012

Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)

___ **Complete the Prerequisite Worksheet**

Type 3: Course in communication or computational skills as prerequisite for course other than another skills course (e.g., English 1 prerequisite for Anatomy 1)

X **Complete the Prerequisite Worksheet**

Complete Data Analysis

Type 4: Program prerequisites

___ **Prerequisite must be required for at least one of the courses in the program. Explain:**

Type 5: Health and Safety

___ **Students who lack the prerequisite might endanger themselves, other students or staff. Explain:**

Type 6: Recency and other measures of readiness (miscellaneous)

___ **Data must be collected according to sound research principles in order to justify such prerequisites.**

Complete the Prerequisite Worksheet

Prerequisite Worksheet

ENTRANCE SKILLS FOR **Biology 95C**

(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Extract information from the scientific literature that is pertinent to formulating research questions and experimental design.
B)	Propose hypotheses that can be tested by cellular and molecular biology methods.
C)	Design and conduct experiments that will effectively test a scientific hypothesis.
D)	Collect scientific data with safety and accuracy.
E)	Recognize and utilize statistical methods applicable to specific data sets.
F)	Relate data interpretation to existing knowledge presented in scientific literature.
G)	Communicate research findings in conventional scientific formats.

EXIT SKILLS (objectives) FOR **English 21B**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Write sentences of varying syntactical structure, generally free of grammatical, spelling and syntactical errors.
2.	Read, draw inferential and literal information from, and evaluate academic and popular prose, so that they can use a reader to support a focused essay.
3.	Write strong topic sentences and situate them effectively within body paragraphs.
4.	Write effective introductory, body, and concluding paragraphs in essays.
5.	Write coherent and cohesive expository essays, of at least five paragraphs that may include development through definition, description, exemplification, cause and effect, classification.
6.	Use linking and transitional elements within sentences, between sentences and between paragraphs.
7.	Compose papers efficiently using various prewriting, planning, drafting, revising and editing strategies.
8.	After critically reading an article at a secondary/post-secondary level, the student will write, in an 80-minute period, a coherent essay containing a complete summary as introduction, a thesis that demonstrates analytic thinking about the article, several supporting paragraphs, and a conclusion.

	ENTRANCE SKILLS FOR Biology 95C							
EXIT SKILLS FOR (English 21B)		A	B	C	D	E	F	G
	1							X
	2	X					X	X
	3							X
	4							X
	5	X					X	X
	6							X
	7							X
	8							X

modified 09/26/2012

Prerequisite / Corequisite Checklist and Worksheet

Biology 95C

Prerequisite: Science 10; Principles and Practice of Scientific Research OR
Biology 21; Cell Biology and Evolution (covered on a separate worksheet)

Other prerequisites, corequisites, and advisories also required for this course:
(Please note that a separate sheet is required for each prerequisite, corequisite, or advisory)

Advisory: English 21B (Eligibility for English 1); English Fundamentals 2

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:

In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

___ Type 1: Standard Prerequisite (required prerequisite at UC or CSU)
Identify three UC or CSU campuses that offer the equivalent course with the equivalent prerequisite.
List schools here:
Complete the Prerequisite Worksheet

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet
Science 10 provides an introduction to the research process giving a foundation for the more advanced skills in literature evaluation, design of a related series of experiments, selection and integration of protocols, and data interpretation to be emphasized in Biology 95C.

modified 09/26/2012

___	Type 3: Course in communication or computational skills as prerequisite for course other than another skills course (e.g., English 1 prerequisite for Anatomy 1) **Complete the Prerequisite Worksheet** **Complete Data Analysis**
___	Type 4: Program prerequisites **Prerequisite must be required for at least one of the courses in the program. Explain:**
_X_	Type 5: Health and Safety **Students who lack the prerequisite might endanger themselves, other students or staff. Explain:** Students will need to follow laboratory safety procedures practiced in Science 10 when completing the research project in Biology 95C.
___	Type 6: Recency and other measures of readiness (miscellaneous) **Data must be collected according to sound research principles in order to justify such prerequisites.** **Complete the Prerequisite Worksheet**

Prerequisite Worksheet

ENTRANCE SKILLS FOR **Biology 95C**

(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Extract information from the scientific literature that is pertinent to formulating research questions and experimental design.
B)	Propose hypotheses that can be tested by cellular and molecular biology methods.
C)	Design and conduct experiments that will effectively test a scientific hypothesis.
D)	Collect scientific data with safety and accuracy.
E)	Recognize and utilize statistical methods applicable to specific data sets.
F)	Relate data interpretation to existing knowledge presented in scientific literature.
G)	Communicate research findings in conventional scientific formats.

EXIT SKILLS (objectives) FOR **Science 10**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Trace the progression of modern scientific research projects from proposals through funding, experimentation, and dissemination.
2.	Explain ethical conduct required in doing science.
3.	Formulate a scientifically testable hypothesis.
4.	Design and conduct experiments that will effectively test a scientific hypothesis.
5.	Collect scientific data with safety and accuracy.
6.	Employ appropriate statistical methods to evaluate collected data.
7.	Critique peer-reviewed scientific articles.
8.	Use oral and written communication methods to present findings in formats recognized by the scientific community, including journal articles and poster presentations.

	ENTRANCE SKILLS FOR Biology 95C							
EXIT SKILLS FOR (Science 10)		A	B	C	D	E	F	G
	1							
	2							
	3		X					
	4			X				
	5				X			
	6					X		
	7	X					X	
	8							X

modified 09/26/2012

Santa Monica College
New SMC Course
Expanded Course Outline for MEDIA 3 - Global Media

Course Cover	
Discipline	MEDIA-MEDIA STUDIES
Course Number	3
Full Course Title	Global Media
Cross Listed Course	Will be cross-listed as Global Studies 3
Catalog Course Description	This course provides a detailed introduction to global media systems around the world, examining the main economic and cultural dimensions of the international media environment. Key theoretical approaches to international and global communication will be examined. Consideration will be given to the key issues, main actors, and significant developments in global media.
Rationale	
Rationale	We would like to add Global Media to our course offerings because our current Media Studies offerings focus exclusively on US media. In today's globalized world, global media is a growing area with promise of career opportunities for students with education/training in this area. Studying the impact of globalization on communication, media practices, and society is also related to Global Citizenship. This first class about Global Media is part of a larger goal of creating a Global Media program or certificate.
Proposal Information	
Proposed Start	Year: 2015 Semester: Spring
Proposed for Distance Ed	No
Proposed for Global Citizenship	Yes
Course Unit/Hours	
Variable Hour Exist	NO
Credit Hours	Min: 3.00
Weekly Lecture Hours	Min: 3.00 (Sem: 54)
Weekly Laboratory Hours	Min: 0

Weekly Arranged Hours	Min: 0
Total Semester Instructional Hours	54.00
Load Factor	1.00
Load Factor Rationale	
Repeatability	May be repeated 0 time(s)
Grading Methods	Letter Grade or P/NP

Transfer/General Ed

Transferability

Transfers to UC (pending review)
Transfers to CSU

IGETC Area:

- IGETC Area 4: Social and Behavioral Sciences
  - 4G: Interdisciplinary, Social & Behavioral Sciences

CSU GE Area:

- CSU GE Area D: Social, Political, and Economic Institutions and Behavior, Historical
  - D7 - Interdisciplinary Social and Behavioral Science

SMC GE Area:

- GENERAL EDUCATION PATTERN (SMC GE)
  - Area II-B: Social Science (Group B)
  - Area V: Global Citizenship

Comparable Transfer Courses:

- **California Community College**
  Foothill College
  Global Media VART 8
- **California Community College**
  Cypress College
  Global Media JOUR 110C
- **UC**
  UC Riverside
  Global History, Cultures & Idead GBST 001
- **UC**
  UC Riverside
  World Cinema MCS 024

- **UC**
  UC Berkeley
  International Media MEDIAST 160

Program Applicability	
Designation	Credit - Degree Applicable
Proposed For	**AA Degree** -Global Studies (Culture & Society elective) **AA-T Degree** -Communication Studies

Course Objectives
Upon satisfactory completion of the course, students will be able to:
1. Analyze global media systems around the world.
2. Examine the main economic and cultural dimensions of global media.
3. Compare approaches to international and global communication.
4. Identify the key issues and actors involved in the global media environment.

Course Content	
10%	Introduction to globalization: Relationship between globalization and the media
20%	Specific media industries (such as film industry, global music, global advertising, international news/news agencies)
20%	Regional examples and cross-national case studies (Regions such as Europe, Asia, Africa and the Middle East. Case studies such as the Americas and US Spanish language broadcasting, reality TV shows and local adaptations, Arab satellite television)
15%	Theoretical approaches to international and global communication: Development research traditions and global communications, the NWICO Debate, Cultural dependency and globalization; Media imperialism
5%	Economics of international media
5%	Process of conglomeration; Globalization and global media corporations; International strategies of media companies
5%	Cultural studies in global media; Global audiences' reception studies
5%	Transnationalization of culture; National identity in a global environment
5%	Contra-flow in global media
5%	Globalization, Americanization, and Hybridity
5%	Regulatory issues: Global communication governance
Total: 100%	

Methods of Presentation	
Opt Heading	
Methods	Group Work Lecture and Discussion Projects

	Visiting Lecturers
Other Methods	videos and websites

Methods of Evaluation

Methods	• 5% - Class Participation • 30% - Exams/Tests • 25% - Group Projects • 10% - Quizzes • 30% - Written assignments • 100% - Total

Appropriate Textbooks

Textbooks such as the following are appropriate:

Formatting Style	APA

Textbooks

1. Flew, T. *Understanding Global Media*, ed. Hampshire, UK: Palgrave Macmillan, 2007, ISBN: 1403920494.

2. McPhail, T.. *Global Communications: Theories, Stakeholders, and Trends*, 4th ed. Wiley, 2014, ISBN: 978-1-118-62202-5.

3. Thussu, D. *International Communication: Continuity and Change* , 2nd ed. Hodder Arnold, 2006, ISBN: 9780340888926.

4. Thussu, D. *International Communication: A Reader*, ed. Routledge, 2008, ISBN: 978-0-415-44456-9.

Assignments

Sample Assignment

1. The Internet is a global network. The Internet has been used to repress information and to help spread information. For example, during the Arab Spring, the Internet and social media were used to organize protests. In January 2011, the Egyptian government shut down electronic communication, including Twitter and Facebook. This further enraged the Egyptian people who took to the streets protesting the regime of President Hosni Mubarak.Do you think the Egyptian government had a right to shut down the Internet? What other governments have shut down the Internet and for what reasons? How do different countries view the role of the Internet? Are there any times when a government should have the right to shut down the Internet and electronic communications? Explain.

Write a 450 word minimum essay.

2. In the US, we may take free speech for granted. However, press freedom varies greatly around the world. Review the "Map of Freedom in the World" interactive map on Freedomhouse's website. (http://www.freedomhouse.org)

Find two countries that share a border: one *green* (with free media) and one *purple* (with government controlled media). For example, Israel and Egypt. Write about and compare the current state of the media in each country. How are these neighboring countries so different that one has free media and one has

government controlled media?

Write a 500 word minimum essay.

Student Learning Outcomes	
1. Students will be able to identify key issues and significant developments in global media.	
2. Students will be able to identify key theoretical approaches to global media.	
Minimum Qualification	
Minimum Qualifications:	Mass Communication (Masters Required)
Library	
List of suggested materials has been given to librarian?	Yes
Library has adequate materials to support course?	No
Additional Comments/Information	
Global Citizenship Application	
Global Citizenship Category	Global Studies
Global Citizenship Sub-Categories	Course content is explored primarily through a global perspective and a comparative and/or analytical framework is used. At least two societies or cultures outside the United States and their global impact are explored. Course material has contemporary significance. For example, a course would not only examine a period of history but the ways in which that period of history impacts the way we live in the world today. Course content addresses at least two interconnected systems (such as cultural, ecological, economic, political, social and technological systems).
Citizenship Rationale	1. The course content is explored primarily through a global perspective. Global media and globalization are the entire focus of the course. Many societies outside the United States will be explored by looking at their media industries (including the Middle East and North Africa, Sub-Saharan Africa, Asia-Pacific, Western Europe, Central and Eastern Europe/Eurasia, and the Americas). 2. The course will focus on global media in terms of how it impact

	societies and cultures around the world today and its role in globalization. 3. The course content addresses three interconnected systems (sociocultural, economic, and technological) related to global media.

Attached Files

Suggested Materials

Nutrition and Dietetics
Associate in Science for Transfer (AS-T)

The Associate in Science in Nutrition/Dietetics for Transfer (AS-T) involves the understanding of nutrient metabolism and the relationship to optimal health including prevention of degenerative diseases. The course of study provides an integrated curriculum of nutrition coursework along with a solid background in the human body, chemical function and metabolism of nutrients, and the sociological implications of food and behavior. Throughout the degree students will acquire and develop knowledge and skills that will provide a solid background in nutrition so that students can make informed decisions on their personal health.

Upon completion of the Associate in Science in Nutrition/Dietetics for Transfer (AS-T), students will have a strong academic foundation in the field and be prepared for upper division baccalaureate study. Completion of the degree indicates that the student will have satisfied the lower division requirements for transfer into a Nutrition/Dietetics program for many campuses in the California State University system.

Area of Emphasis

Required Core Courses:		**Units**
NUTR 1	Introduction To Nutrition Science	3
CHEM 11	General Chemistry I	5
MCRBIO 1	Fundamentals Of Microbiology	5
PSYCH 1	General Psychology	3

List A: Select any two (2) courses from the list below (8 units minimum):		**Units**
ANATMY 1	Human Anatomy	4
CHEM 12	General Chemistry II	5
CHEM 21	Organic Chemistry I	5
MATH 54	Elementary Statistics	4
PHYS 3	Human Physiology	4

List B (minimum of 3 units): **Units**

Any course from List A not used above or
C-ID NUTR 120 (equivalent to SMC NUTR 8)

NUTR 3	HEALTH 10
NUTR 7	HIST 47
ACCTG 2	JOURN 1
ANATMY 1	MATH 2
ANTHRO 2	MATH 7
BIOL 3	MATH 8
BIOL 21	MATH 28
BIOL 22	MEDIA 1
BIOL 23	MCRBIO 1
BUS 5	PHILOS 10
BUS 6	PHYSCS 6
CHEM 10	PHYSCS 7
CHEM 21	PHYSCS 8
CHEM 22	PHYSCS 9
CHEM 24	PHYSCS 21
CHEM 31	PHYSCS 23
COM ST 11	POL SC 1
COM ST 21	PSYCH 1
CIS 4	PSYCH 19
ECON 1	SOCIOL 1
ECON 2	SOCIOL 1s
ENGL 1	SOCIOL 2
ENGL 2	SOCIOL 2s
ENGL 31	SOCIOL 4

Total Units for Area of Emphasis: **27**

PID 200

Spanish
Associate in Arts for Transfer (AA-T)

The Associate in Arts in Spanish for Transfer (AA-T) prepares students to interact with the Spanish-speaking world by providing them with a foundation in the language, history, arts, culture, and literatures of the different countries that comprise it. As students complete this program, they acquire knowledge and skills that are applicable to diverse areas of study in the liberal arts as well as preparation for various professions that provide services or products for Spanish-speakers.

Upon completion of the Associate in Arts in Spanish for Transfer (AA-T), students will have a strong academic foundation in the field and be prepared for upper division baccalaureate study. Completion of the degree indicates that the student will have satisfied the lower division requirements for transfer into Spanish or similar majors for many campuses in the California State University system.

Area of Emphasis

Required Core Courses (16 units minimum)		**Units**
SPAN 1	Elementary Spanish I	5
	and	
SPAN 2 or SPAN 11	Elementary Spanish II or Spanish For Native Speakers I	5
	and	
SPAN 3 or SPAN 12	Intermediate Spanish I or Spanish For Native Speakers 2	5
	and	
SPAN 4	Intermediate Spanish II	5

If student “places out of” any of the above levels of Spanish, the following courses may be substituted (up to 11 units):

Spanish 8 (2)
Spanish 9, 20 (3)
History 5, 6, 19, 42, 43, 47 (3)
French 1, 2, 3, 4 (5)
Italian 1, 2, 3 (5)
Anthropology 2, 7, 14, 21 (3)
Communication Studies 35, 37 (3)
Ethnic Studies 10 (3)
English 2, 31, 53, 57, 58 (3)
Geography 2 (3)
Media 46 (3)
Sociology 1, 1s, 31, 33, 34 (3)

Restricted Electives: Select one of the following courses if not used above (3 units minimum):	**Units**
Spanish 8 (2) Spanish 9, 20 (3) History 5, 6, 19, 42, 43, 47 (3) French 1, 2, 3, 4 (5) Italian 1, 2, 3 (5) Anthropology 2, 7, 14, 21 (3) Communication Studies 35, 37 (3) Ethnic Studies 10 (3) English 2, 31, 53, 57, 58 (3) Geography 2 (3) Media 46 (3) Sociology 1, 1s, 31, 33, 34 (3)	3

Total Units for Area of Emphasis: 19

PID 201

Accounting (REVISED 5/14/14)
Associate in Science (AS)

General accountants examine financial records of municipal, county, state, and federal agencies for compliance with laws. They record transactions, such as receivable, payable, payroll, property into a general ledger. Corporate accountants set up and design accounting-bookkeeping systems and procedures, risk management programs, tax law and finance methods, record financial transactions, and analyze and evaluate financial records for businesses. Their duties include interpreting financial information and preparing reports for business executives and government regulatory agencies. Advancement includes senior accountant, controller, treasurer, and chief financial officer positions.

Area of Emphasis

Required Core Courses: (12 Units)		**Units**
BUS 1	Introduction To Business	3
BUS 31	Business English Fundamentals	3
	or	
ENGL 1	Reading And Composition 1	3
BUS 32	Business Communications	3
CIS 1	Computer Concepts With Applications	3
	or	
CIS 4	Introduction To Computers Business Applications	3

Required Concentration Courses: (16 Units)		**Units**
ACCTG 1	Introduction to Financial Accounting	5
	and	
ACCTG 2	Corporate Financial and Managerial Accounting	5
ACCTG 9 (new course added)	Accounting Ethics	3
ACCTG 31A	Excel For Accounting	3
	or	
CIS 30	Microsoft Excel	3
~~ACCTG 35~~ (moved to recommended)	~~Quickbooks~~	~~3~~
	~~**or**~~	
~~CIS 35~~ (moved to recommended)	~~Quickbooks~~	~~3~~
Additional Recommended Courses:		**Units**
ACCTG 10A	Intermediate Accounting A	3
ACCTG 10B	Intermediate Accounting B	3
ACCTG 10C	Intermediate Accounting 10C	4
ACCTG 6	Accounting Consolidations	3
ACCTG 7	Accounting Special Topics	3
ACCTG 11	Cost Accounting	3
ACCTG 12	Auditing	3
ACCTG 15	Individual Income Taxes	3
ACCTG 16	Taxation of Corporations, Partnerships, Estates and Trusts	3
ACCTG 31B	Advanced Excel For Accounting	3
BUS 5	Business Law	3
ACCTG 35	Quickbooks	3
	or	
CIS 35	Quickbooks	3
Total Units for Area of Emphasis:		**28**

Professional Accountant (REVISED) (5/6/14)
Certificate of Achievement

Required Courses:		**Units**
ACCTG 1	Introduction to Financial Accounting	5
ACCTG 2	Corporate Financial and Managerial Accounting	5
~~ACCTG 6~~	~~Accounting Consolidations~~	~~3~~
~~ACCTG 7~~	~~Accounting Special Topics~~	~~3~~
ACCTG 6 OR 7	Accounting Consolidations OR Accounting Special Topics	3
ACCTG 9	Accounting Ethics	3
ACCTG 10A	Intermediate Accounting A	3
ACCTG 10B	Intermediate Accounting B	3
ACCTG 10C	Intermediate Accounting 10C	4
~~ACCTG 11~~ (moved to recommended)	~~Cost Accounting~~	~~3~~
ACCTG 12	Auditing	3
ACCTG 15	Individual Income Taxes	3
~~ACCTG 16~~ (moved to recommended)	~~Taxation of Corporations, Partnerships, Estates and Trusts~~	~~3~~
BUS 5	Business Law	3

Recommended Courses:		**Units**
ACCTG 11	Cost Accounting	3
ACCTG 16	Taxation of Corporations, Partnerships, Estates and Trusts	3
ACCTG 26 *(same as BUS 6)*	Advanced Business Law	3
	or	
BUS 6 *(same as ACCTG 26)*	Advanced Business Law	3
ACCTG 31A	Excel For Accounting	3
ACCTG 31B	Advanced Excel For Accounting	3
ACCTG 35 *(same as CIS 35)*	Quickbooks	3
	or	
CIS 35 *(same as ACCTG 35)*	Quickbooks	3
ACCTG 45 *(same as BUS 45)*	Individual Financial Planning	3
	or	
BUS 45 *(same as ACCTG 45)*	Individual Financial Planning	3
CIS 4	Introduction To Computers Business Applications	3
Total Units for Area of Emphasis:		**~~41~~ 35**

PID 2

Discussion on Prerequisites Data Study

From the Chair and Vice Chair of Curriculum to Institutional Research:

We think it would be helpful for the committee to better understand what is required in terms of data scrutiny, what research questions were asked, and for the committee to communicate their concerns as well.

From: BERUMEN_DANIEL
… these are my quick thoughts on the specific issues brought up below:

1. Everyone below makes good points! But the research question they are trying to argue about is different from what the report is trying to do. We were tasked with answering whether ANAT 1, PHYS 3 or a combination of the two meet the prerequisite standards, NOT which of the two courses is the "better prerequisite". Or even if they are the "best" prerequisite" of all courses available.
2. The success rate tables are under the "Cohort" section, and not part of the analysis section, because they are there as a reference. So yes, "you can't reliably extrapolate useful information" about the relationship between the courses by just looking at the success rates we presented. You can only use it to get an idea of how the breakdown of students looks like (ex: how many took ANAT 1, how many took PHYS 3 etc).
3. Over the two years there were less than 50 ANAT 1 enrollments that did not also complete PHYS 3. If we remove Ws, that number falls to below 30 (which makes sense since both are prerequisites to entering the Nursing program). There is simply too much variance at that level to make any definitive statements based on success rates.
4. Even if we were to try to compare the two, we would probably not find a satisfactory answer using the data alone. There are already a number of confounding issues in analyzing prerequisites from different subjects (we could theoretically find a connection between MATH 7 and NURSNG 17 based on the type of student that would have already completed a higher level math, and not the content between the two).

In my personal opinion, in prerequisite validation the data works best as a supplement to the content review and a discussion about the enrollment and persistence barriers it may create. In other words, unless it contradicts the assumptions being made, then the decision about which of the two courses works the best should rely heavily on the content review.

From: SHIRINYAN_DAVID
After Teri's email I started to look at this as Sandra had and came to the same conclusion.

Looking at the number of students it's clear that the analyses were not done the way they should have been done.

What Teri raised and Sandra confirmed is that the analyses were misleading due to overlap and colinearity that should have been teased apart as much as possible. I had assumed IR had done this for us because it's the only useful way to look at this issue and it's what I asked them for last time we saw this. As far as I'm concerned this issue is closed and I'm happy to see the data used to support our decision making.

I would like to propose that we (the entire committee or a sub committee) meet with IR to explicitly lay out our specific data needs and understand their data constraints and criteria for future reviews.
Thank you all for taking time to look at this. I hope you understand that I want the best for our students. I'm always thinking about offering maximal opportunity with minimal roadblocks.

From: HUTCHINSON_SANDRA
It is great to see so much discussion and debate going into finding the best prerequisites for the NURSNG17 course. This makes me proud to be both a professor here at SMC, as well as a member of the curriculum committee.

After looking over the previous emails, I took a closer look at the handout, and remembered something that I learned while compiling data during my undergrad psych research: If the sets and cohort numbers don't add up, then you can't reliably extrapolate useful information from the data.
I believe that is what is going on here.

The data in the "Count" and "Successful" columns of Table 2 just doesn't add up (204+167+159=530, not 385). This is probably because of overlap between the groups in the rows. For example, the "Completed both" row also includes the students from the "Completed Anatomy" row. The overlapping data groups obfuscate the actual information that we want to know (i.e., How did students fare with 1. ANAT1 only; 2. PHYS3 only; 3. both prereqs; and 4. no prereqs?). Below is an attempt to extract that data in a useful way for the committee.

Please correct me if this is wrong.
group 1 took ANAT1 only = (completed ANAT1) - (completed both ANAT1+PHYS3)
We have to do this because otherwise the "complete both" are included in the ANAT1 only group.
Total attempted 204-159 = 45
Total passed 144-120 = 24
% Success = 53.3%

group 2 took PHYS3 only = (completed PHYS3) - (completed both)
attempted = 167-159 = 8
passed = 124-120 = 4
% Success = 50%
Numbers here are probably too small to be useful, but this makes sense that there are few students in this group since ANAT1 is a prerequisite for PHYS3 here at SMC.

group 3 took ANAT1 + PHYS3 = Thankfully they give us this = 159
attempted = 159
passed = 120
% Success = 75.5%
If we add up these subgroups, we should be able to determine group 4.
group 4 took no prereqs = (total cohort) - (groups 1+2+3)
attempted = 385 - (45+8+159) = 173
passed = (207 - (24+4+120) = 59
%Success = 36%

I cannot say for certain that this is correct, but the numbers seem to make sense. If you plug these groups together and compare them to table 3, the numbers still work.
Table 3 lists 63 students as completing the course without taking ANAT1 (group 4 + group 2 = 63). This also works for the remaining rows in table 3. 59+24=83 and 59+4+24=87.

If the above is accurate, then there appears to be a large benefit to having taken both ANAT1 and PHYS3 over taking just ANAT1 or neither (75.5% vs 53.3% vs 36.1%). Hopefully we can now rest comfortably knowing that we have made the best choice for the students and the school by requiring PHYS3 (and implied ANAT1, due to its position as a sub-prerequisite) for NURSNG17 (and that we have firmly beaten this horse to death).

From: MEYER_WALTER
Here is my understanding. The conclusion being we accepted to ignore the data and trust the department.

The material of Physiology 3 is the information that would be the most helpful to Nursing 17 from the faculty point of view (Both Life Science and Nursing).

Anatomy 1 & Physiology 3 at some point prior were either not a per-requisite, or they were not enforced per-

requisites and we had 53.8% success rate.

Although we do not fully understand why just Anatomy 1 as a per-requisite increases success in Nursing 17 so dramatically, statistically, it does. The why is the hypothetical to explain the data.

My personal opinion as an educator is that if a student can get through Anatomy 1 they have the necessary skills (intellect, perseverance, study habits, etc) to be successful in similar science based courses. Having the additional Physiology 3 class as an additional per-requisite, while being beneficial, does not result in a "significant" increase in success to justify it.

From: BERNSTEIN_TERI

I spoke up a few times during this discussion--but I didn't feel as though I was totally up on the conventions of the process. I only was relying on my own common sense--whatever that was worth.

Here is the part that really baffled me--and seemed to be a huge gap in the research data. In order to properly evaluate the prerequisite's effect, I wanted to know: if someone took ONLY Anatomy but NOT Phys 3…how did they do?

It appeared to me that the research study did not isolate students who ONLY took Anatomy--and that they couldn't really isolate students who ONLY took anatomy. It would be even harder to isolate students who ONLY took PHYS 3, since they would have to come from other campuses (our PHYS 3 pre reqs being what they are).

Having taken both Anatomy and Physiology myself, my anecdotal personal experience would align with Sandra's comment that Physiology seems to be better preparation for a Pharmacology course.

I am no expert on statistics, but I do like to think things through so that they make sense. I was unable to be satisfied in this way, so I went with the majority, which seemed to be voting with the department, which I would trust to have the student's bests interests at heart. So, in substance, I think the Committee did the right thing.

From: SHIRINYAN_DAVID

I am unsatisfied with my explanation of the prerequisite situation for Nursing 17. I want to give it another shot because I think this is a critically important part of our job.

The purpose of the prerequisite review process as it has been explained to me is to find the balance between ensuring success, while at the same time not encumbering students with unnecessary prerequisites.

The analysis that Institutional Research conducted showed that there is clearly a need for change because the success rate of 53.8% is not acceptable.

The analysis showed that students who have completed Anatomy 1 had 70.6% success, students who completed Physiology 3 had 74.3% success rate and students who had both had 75.5% success rate. Statistically speaking the difference between 70.6 and 74.3 is not significant. The additional 3.7% success afforded by taking Physiology 3 *does not justify the addition of this additional prerequisite*. The reason I argued that Physiology 3 was the wrong choice is because it effectively requires that students take both Anatomy 1 and Physology 3 (because Anatomy 1 is a prerequisite for Physiology 3). There being no data basis for making them take both courses, I proposed going with the less encumbering option of Anatomy 1 as a prerequisite and Physiology 3 as an advisory.

If we are to use these data in decision making then I don't know how else to interpret the data. If we are to ignore the data and go with the content review alone, then the department should alone decide what makes sense to them. But please review the analyses to see that there is no data basis for making these students take both courses - as the committee voted to do.

NURSING COURSE PREREQUISITE VALIDATION: REPORT OF THE FINDINGS

Santa Monica College
Office of Institutional Research
Daniel Berumen, Research Analyst, Institutional Research
Ani Aharonian, Research Analyst, Institutional Research
Hannah Lawler, Dean, Institutional Research

November 2013

Background

In fall of 2013, the Santa Monica College Curriculum Committee temporarily approved two course prerequisites, ANATMY 1 (General Human Anatomy) and PHYS 3 (Human Physiology), for NURSING 17 (Pharmacological Aspects of Nursing) based on the results of a course content analysis. The final approval depends on a statistical evidence supporting the need for the course prerequisites for successful completion of the target course (NURSNG 17). The current report summarizes the findings of the statistical analyses conducted to validate the two course prerequisites on NURSNG 17.

Currently, California Community College (1998) Matriculation Regulations require that in order to implement a mandatory prerequisite requirement on a course, a relationship between the course and its prospective prerequisite be established. Statistical validity, the second method of prerequisite validation, is the use of empirical data to evaluate whether the prerequisite is necessary for success in the outcome course and whether students without the prerequisite are highly unlikely to earn a satisfactory grade in the course. "Highly unlikely" is undefined except through the three standard research analyses recommended in "Good Practice for the Implementation of Prerequisites" (ASCCC)[1].

The following table describes the three research methods and minimum standards for evidence outlined by the ASCCC in the evaluation of the relationship between the prerequisite and success in the outcome course. While a logistic regression analysis is not one of the three methods outlined by the ASCCC, this analysis has been used previously at SMC in order to evaluate the relationship between the prerequisite and the outline course.

Table 1. Methods of validating course prerequisites

Research Method	Description	Criterion for Evidence
Net Increase in Accuracy	Applying the prerequisite should show a gain in the percentage of students who are successful in the outcome course	Increase of at least 10% in course success rate
2x2 Matrix & Chi-Square	A 2x2 matrix of outcomes in the course (success, non-success) and prerequisite status (met the prerequisite, did not meet the prerequisite) and chi-square to determine where a systematic and statistically significant relationship exists between the variables	The percentage of students who meet the prerequisite and are successful in the outcome course should be statistically larger than expected
Correlation Coefficient	Analysis to determine the strength of the relationship between performance in the prerequisite and outcome courses	A minimum of +0.35
Logistic Regression	Predictive analysis to determine whether prerequisite status predicts performance in the outcome course.	Prerequisite status contributes statistically significant predictive value.

SOURCE: Academic Senate for California Community Colleges (1997). *Good Practice for the Implementation of Prerequisites.* Sacramento, CA: Chancellor's Office.

[1] An updated guide created by the RP Group is available now: http://www.rpgroup.org/sites/default/files/RPGroupPreqreqGuidelinesFNL.pdf

COHORT

The purpose of the current study is to provide the results of a statistical analysis completed to investigate the relationship between successful course completion of ANAT 1 and/or PHYS 3 on success in NURSNG 17. The cohort consists of students who first enrolled in NURSNG 17 between fall 2010 and spring 2013. Only students' first attempts were included in the analyses to account for the potential effects of course repetition on successful course completion. Additionally, students who were identified as having previously attained an Associate's or Bachelor's degree were removed from the cohort. While the college's data includes overall units enrolled at other institutions, it does not identify which courses students completed. Students with completed degrees are more likely to have completed a Biological Sciences requirement that may include an Anatomy or Physiology course.

The following table contains the count of the NURSNG 17 cohort by course prerequisite status. Course success is identified as having completed a course with a grade of A, B, C or P.

Table 2. NURSNG 17 Cohort

	Count	Percent of Cohort	Successfully Completed NURSNG 17	Success Rate
NURSNG 17 Cohort	385	100.0%	207	53.8%
Completed ANAT 1 prior to enrollment	204	53.0%	144	70.6%
Completed PHYS 3 prior to enrollment	167	43.4%	124	74.3%
Completed both ANAT 1 and PHYS 3 prior to enrollment	159	41.3%	120	75.5%

There were 385 students included in the cohort, of whom 207 received an A, B, C or P in the course. Of the 385, 204 (53%) completed ANAT 1 prior to enrollment, and 167 (43.4%) completed PHYS 3 prior to enrollment. The final row, contains the percentage of students (41.3%) that completed both courses prior to enrollment in NURSNG 17. The success rates in NURSNG 17 were higher for students who completed either one or both of the suggested prerequisite courses when compared with the overall NURSNG 17 successful course completion rate

The table below contains the count of successful students who did not successfully complete the prerequisite courses.

Table 3. NURSNG 17 students who did not meet any prerequisite

	Successfully Completed NURSNG 17	Percent of all successful enrollments
Total NURSNG 17 Students	207	100.0%
Did not successfully complete ANAT 1 prior to enrollment.	63	30.4%
Did not successfully complete PHYS 3 prior to enrollment.	83	40.1%
Did not successfully complete both ANAT 1 and PHYS 3 prior to enrollment.	87	42.0%

Based on the data available, about 30% of the students who were successful in NURSNG 17 would not have been able to enroll in the course if an ANAT 1 prerequisite was in place. About 40% of the total number of successful students would not have been able to enroll if there was a PHYS 3 prerequisite. Some caution should be taken when interpreting the data since students may have completed ANAT 1 or PHYS 3 at another institution.

DATA ANALYSES AND FINDINGS

The following section describes the findings of the research analyses for validation of course prerequisites listed in Table 1.

Net Increase in Accuracy

According to the ASCCC (1997), if by applying the prerequisite, the success rate in the outcome course increases by at least 10%, there is enough empirical evidence to support the need for the prerequisite.

Table 4 contains the overall course success rates and the rates after each of the proposed prerequisites are applied to the cohort. Success rates were calculated by dividing the total number of satisfactory grades (A, B, C, or P) by the total course enrollment (A, B, C, P, D, F, I, NP, DR and W grades).

Table 4. Net increase in accuracy

	Success Rate	Net Increase
NURSNG 17 Cohort	53.8%	0.0%
Completed ANAT 1 prior to enrollment	70.6%	+16.8%
Completed PHYS 3 prior to enrollment	74.3%	+20.5%
Completed both ANAT 1 and PHYS 3 prior to enrollment	75.5%	+21.7%

Prior to applying the prerequisite, the overall course success rate for NURSNG 17 was 53.8%. In each of the three scenarios, the success rate increases by at least 10%. ***Adding either an ANAT 1 or PHYS 3 prerequisite, or a combination of the two, meets the net increase in accuracy threshold.***

2x2 Matrixes of Outcomes and Prerequisite Status: Chi-Square Analysis

Two by two matrices comparing success and non-successful completion for students with and without the prerequisite were constructed. According to Pascarella and Terenzini (2005), while some students withdraw from courses for academic reasons, many withdraw for personal reasons such as job change and family responsibilities. Because information related to the reasons students withdraw are not available, 'W' or withdrawal grades were excluded from the success variable. Unlike the net increase in accuracy analysis, the successful course completion rate was calculated by dividing the number of A, B, C, and P grades by the total number of A, B, C, D, F, P, and NP grades (W's were excluded in the denominator).

A Pearson chi-square statistic was obtained to determine whether prerequisite status and outcome course success are statistically related to one another. In cases where a statistically significant

relationship was found, standardized residuals were computed to determine which cells in the matrices were the major contributors to the significant chi-square test statistic.

Table 5. 2X 2 Table for ANAT 1 Prerequisite

NURSNG 17 Outcome	ANAT 1 Prerequisite Status	
	No	Yes
Successful (A, B, C, CR)	63 **64.9%** STD RES = -1.9	144 **92.9%** STD RES = +1.5
Non-successful (D, F, NC, I)	34 **35.1%** STD RES = +4.0	11 **7.1%** STD RES = -3.2

Chi Square = 31.786, p = .000, n =252

Table 6. 2X 2 Table for PHYS 3 Prerequisite

NURSNG 17 Outcome	PHYS 3 Prerequisite Status	
	No	Yes
Successful (A, B, C, CR)	83 **70.3%** STD RES = -1.4	124 **92.5%** STD RES = +1.3
Non-successful (D, F, NC, I)	35 **29.7%** STD RES = +3.0	10 **7.5%** STD RES = -2.8

Chi Square = 21.079, p = .000, n =252

Table 7. 2X 2 Table for ANAT 1 and PHYS 3 Prerequisite

NURSNG 17 Outcome	ANAT 1 and PHYS 3 Prerequisite Status	
	No	Yes
Successful (A, B, C, CR)	87 **70.7%** STD RES = -1.4	120 **93.0%** STD RES = +1.4
Non-successful (D, F, NC, I)	36 **29.3%** STD RES = +3.0	9 **7.0%** STD RES = -2.9

Chi Square = 21.33, p = .000, n =252

The percentage of students who were successful in NURSNG 17 significantly differed by whether they met just the ANAT 1 prerequisite, just the PHYS 3 prerequisite or if they met both prior to enrollment. In all three tables, disproportionately more students who met the prerequisite were successful in NURSNG 17 than expected by chance variation. In addition, disproportionately more students who did not meet the prerequisite were not successful than expected by chance.

All cells contributed to the significance of the chi-square statistic. There were disproportionately more students in the yes prerequisite/successful and no prerequisite/unsuccessful cells than expected. In addition, there were disproportionately fewer students in the no prerequisite/successful and yes

prerequisite/unsuccessful cells than expected. ***The 2x2 matrix and chi-square analysis supports the establishment of ANAT 1, PHYS 3 or both as a prerequisite for NURSNG 17.***

Correlational Analyses

Correlation coefficients were computed to establish whether a relationship existed and to determine the strength of the relationship between performances in ANAT 1 or PHYS 3 and NURSNG 17. A Pearson correlation was computed for grades in the prerequisite course and NURSNG 17 where an A=4, B=3, C=2, D=1, and F=0.

Table 8. Correlation Coefficients

	Count	Correlation Coefficient	Significance Level
ANAT 1	153	+ .244	$p<.01$
PHYS 3	132	+ .481	$p<.001$

Table 8 provides the correlation coefficients for NURSNG 17 outcomes. A significance level at or below the .05 level indicates a statistically significant relationship between performance in the prerequisite course, and performance in the outcome course. The ASCCC (1997) recommends a minimum correlation of +0.35 as evidence for prerequisite course validation.

The correlation analyses found a positive and significant relationship between grades in ANAT 1 and PHYS 3 and NURSNG 17. Therefore, students who earn high grades in ANAT 1 or PHYS 3 also earn high grades in NURSNG 17. While a significant relationship was observed between ANAT 1 and NURSNG 17, the strength of the relationships does not meet the minimum threshold recommended by the State Academic Senate. ***The correlational analyses show that only PHYS 3 meets the threshold to be included as a prerequisite course for NURSNG 17.***

Logistic Regression Analyses

A logistic regression analyses was employed to test the predictive value of prerequisite status on course performance in NURSNG 17. Success in NURSNG 17 was coded as a categorical value wherein a grade of A, B , C, or P was considered success, and non-success included all D, F, NP, I grades (W grades were removed). In this model the two independent variables were whether students completed ANAT 1 prior to enrollment (yes or no) and whether students completed PHYS 3 prior to enrollment (yes or no).

Table 9. Logistic Regression Summary

	Odds Units Change	Significance
Completed ANAT 1 prior to enrollment	1.017	p = .004
Completed PHYS 3 prior to enrollment	1.004	p = .567

The data revealed that the overall model (completed ANAT 1, completed PHYS 3) significantly predicted[2] whether students successfully completed NURSNG 17.

In the model, completing ANAT 1 significantly predicted success in NURSNG 17, while PHYS 3 did not. A closer look at the data reveled problems with multicollinearity. The two variables are significantly related (.761, p < .001), which can mean that when completing ANAT 1 is included in the model, completing PHYS 3 does not add enough to be significant (p = .567). When PHYS 3 is included as the only independent variable, the results show that it significantly[3] predicts success in NURSNG 17.

Disproportionate Impact Analyses

Title 5 regulations require that an evaluation be conducted to determine whether implementation of a course prerequisite will have a disproportionate impact "on particular groups of students described in terms of race, ethnicity, gender, age or disability, as defined by the Chancellor" (Section 55201[e][2][b]). Although Title 5 does not contain a specific definition of "disproportionate impact", the ASCCC advise that the standard used by the Equal Employment Opportunity Commission be applied.

Under this standard, disproportionate impact occurs if the selection rate for a particular group is less than 4/5ths or 80% of the selection rate for the group with the highest selection rate. Selection rate is calculated by dividing the number of students in a group who meet the prerequisite by the total number of students in the group.

The tables below contain the percentage of students in the cohort by gender and ethnicity.

Table 10. Count of Students by Gender

Gender	Count	Percent
Female	314	81.6%
Male	71	18.4%
NURSNG 17 Cohort Total	**385**	**100%**

Table 11. Count of Students by Ethnicity

Ethnicity	Count	Percent
Asian/Pacific Islander	65	16.9%
Black	25	6.5%
Hispanic	118	30.6%
Native American	1	0.3%
Two or more	8	2.1%
White	106	27.5%
Unknown	62	16.1%
NURSNG 17 Cohort Total	**385**	**100%**

[2] x^2=31.74, *df* = 2, *N* = 252, *p*<.001
[3] *Odds unit change = 1.017, p < .001*

A study was conducted examining whether establishing either prerequisite would have an adverse impact on specific gender and ethnicity groups.

GENDER

Table 12. Selection rates by Gender

Met ANAT 1 Prerequisite	NURSNG 17 Selection Rate
Female	53.2%
Male	52.1%
4/5 or 80% of Highest Selection Rate	42.6%
Disproportionate Impact	**None**
Met PHYS 3 Prerequisite	NURSNG 17 Selection Rate
Female	42.7%
Male	46.2%
4/5 or 80% of Highest Selection Rate	37.2%
Disproportionate Impact	**None**
Met ANAT 1 And PHYS 3 Prerequisite	NURSNG 17 Selection Rate
Female	40.8%
Male	43.7%
4/5 or 80% of Highest Selection Rate	34.9%
Disproportionate Impact	**None**

The data revealed no disproportionate impact of implementing an ANAT 1 or PHYS 3 prerequisite for NURSING 17. The data also revealed that implementing both does not meet the threshold for disproportionate impact.

ETHNICITY

Table 13 contains the selection rates, by ethnic/race group, for eligibility for NURSNG 17 based on the three prerequisite scenarios. Native American/Alaskan Native students and students categorized as "two or more" were not included in the analysis because there were fewer than ten students in each cohort. A table containing the counts and percentages of students in the cohort by ethnicity is available in the appendix.

Table 13. Selection rates by ethnicity

Met ANAT 1 Prerequisite	NURSNG 17 Selection Rate
Asian/Pacific Islander	52.3%
Black	44.0%
Hispanic	60.2%
White	51.9%
4/5 or 80% of Highest Selection Rate	48.1%
Disproportionate Impact	**YES: Black Students**
Met PHYS 3 Prerequisite	NURSNG 17 Selection Rate
Asian/Pacific Islander	53.8%
Black	36.0%
Hispanic	46.6%
White	40.6%
4/5 or 80% of Highest Selection Rate	43.1%
Disproportionate Impact	**YES: Black Students**
Met ANAT 1 And PHYS 3 Prerequisite	NURSNG 17 Selection Rate
Asian/Pacific Islander	50.8%
Black	36.0%
Hispanic	44.9%
White	38.7%
4/5 or 80% of Highest Selection Rate	35.9%
Disproportionate Impact	**NO**

The data revealed that Black students would be adversely impacted by implementing either an ANAT 1 or a PHYS 3 prerequisite. When both are implemented, the rates for the other groups changes enough that there is not an impact based on the 4/5 or 80% threshold. Some caution should be used when interpreting these results as there were only 25 Black students in the cohort. ***Implementing either an ANAT 1 or a PHYS 3 prerequisite on NURSNG 17 would have a negative, disproportionate impact on Black students.***

SUMMARY OF THE FINDINGS

The key findings from the current study regarding the establishment of either ANAT 1 or PHYS 3 as prerequisites for NURSNG 17 are:

- Based on an analysis of students enrolled in the course during the previous three academic years, about 53% of students enrolled in NURSNG 17 met the ANAT 1 prerequisite, about 43% met the PHYS 3 prerequisite, and 41% met both. This means about 47% to 59% of students would be affected by the establishment of the proposed prerequisites.

- Without the prerequisite, the overall course success rate in NURSNG 17 was 53.8%. Establishing ANAT 1 or PHYS 3 as a prerequisite would increase the success rates to 70.6% and 74.3%, respectively. Implementing both would increase the success rate to 75.5%. All three scenarios meet the net increase in accuracy threshold of 10%.

- A statistically significant relationship exists between meeting any of the three prerequisite statuses and NURSNG 17 success. In all three cases, disproportionately more students with the prerequisite are successful in NURSNG 17 than students who do not meet the prerequisite.

- There is a positive and significant relationship between performance in ANAT 1 or PHYS 3 and NURSNG 17; students who earn higher grades in the former also earn higher grades in the latter. However, the size of the correlation for ANAT 1 is only small to moderate and does not meet the threshold of +.35 recommended by the ASCCC. The relationship between PHYS 3 and NURSNG 17 does meet the threshold.

- Establishing either prerequisite has no disproportionate impact on any gender groups.

- Establishing ANAT 1 or PHYS 3 as a prerequisite for NURSNG 17 would adversely impact Black, students; disproportionately fewer students from this group would have access to the course when compared with other ethnic/race groups. Establishing both would have no disproportionate impact on any ethnic/race group.

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