

Agenda
Subcommittee on Curriculum
Thursday, October 5, 2017
3:30 PM Room 251 University Center

Members: Mary Ash (NSM to 2018), Monika Brown (LETT to 2019), Alexandra Cole (SGA Secretary), Tracy Cooper (SBS to 2019), Natricia Drake (Acting Registrar), Ayanna Edwards (SGA Senator), Irina Falls (EDUC to 2018), Naomi Lifschitz-Grant (ARTS to 2019), J. Porter Lillis, Secretary (SBS to 2018), Jaime Martinez, Chair (LETT to 2018), Elizabeth Normandy (VC of AA Designee), Roland Stout (NSM to 2019), Nathan Thomas (ARTS to 2018), Marian Wooten (EDUC to 2019)

Proposal Details Available in Curriculog System: <https://uncp.curriculog.com/agenda:33/form>
(note: all faculty and staff can log into Curriculog with a UNCP id & password)

1. Call to Order

2. Adoption of Agenda

3. Approval of Minutes of September 7, 2017 (Appendix B)

4. Proposals from the Writing Intensive Committee (see Appendix C)

4.1 Program Proposal: add PLS 4170 International Security Policy to the list of approved WE courses

4.2 Program Proposal: add PHY 4200/4210 Advanced Laboratory I and II to the list of approved WD courses

5. Proposal from Livermore Library

5.1 Course Proposal: adjust credit hours for LIB 1000 Intro to Academic Research

6. Proposal from the Department of Chemistry

6.1 Program Proposal: revise B.S. in Chemistry, Molecular Biotechnology track

7. Proposals from the Department of Philosophy and Religion

7.1 Course Proposal: change course number for REL 2030 The Pentateuch

7.2 Course Proposal: create REL 3350 Sexuality and Religion

8. Proposals from the Department of Health and Human Performance

8.1 Program Proposal: create M.S. in Athletic Training

8.2 Course Proposal: create ATR 5000 Functional Anatomy

8.3 Course Proposal: create ATR 5010 Emergency Care

8.4 Course Proposal: create ATR 5100 Clinical Experience I

8.5 Course Proposal: create ATR 5120 Clinical Examination and Diagnosis I

8.6 Course Proposal: create ATR 5130 Evidence-Based Practice I

8.7 Course Proposal: create ATR 5140 Therapeutic Interventions I

8.8 Course Proposal: create ATR 5200 Clinical Experience II

8.9 Course Proposal: create ATR 5220 Clinical Examination and Diagnosis II

8.10 Course Proposal: create ATR 5230 Evidence-Based Practice II

8.11 Course Proposal: create ATR 5240 Therapeutic Interventions II

8.12 Course Proposal: create ATR 5300 Clinical Experience III

- 49 **8.13 Course Proposal:** create ATR 5320 Clinical Examination and Diagnosis III
50 **8.14 Course Proposal:** create ATR 5330 Evidence-Based Practice III
51 **8.15 Course Proposal:** create ATR 5340 Therapeutic Interventions III
52 **8.16 Course Proposal:** create ATR 5400 Clinical Experience IV
53 **8.17 Course Proposal:** create ATR 5420 Clinical Examination and Diagnosis IV
54 **8.18 Course Proposal:** create ATR 5430 Evidence-Based Practice IV
55 **8.19 Course Proposal:** create ATR 5440 Therapeutic Interventions IV
56 **8.20 Course Proposal:** create ATR 5500 Clinical Experience V
57 **8.21 Course Proposal:** create ATR 5560 Leadership of Athletic Training
58 **8.22 Course Proposal:** create ATR 5570 Wellness Promotion Across the Lifespan
59 **8.23 Course Proposal:** create ATR 5600 Clinical Experience VI
60 **8.24 Course Proposal:** create ATR 5660 Transition to Professional Practice
61 **8.25 Course Proposal:** create ATR 5700 Clinical Experience VII
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64 **9. Unfinished Business**
65 **10. New Business**
66 **11. Announcements**
67 **12. Adjournment**
68

69 **Appendix A: Curriculum Development and Revision Process**

- 70
- 71 The University of North Carolina at Pembroke has a clearly defined process for the development of
- 72 curriculum, including degree programs, tracks, concentrations, minors, and individual courses:
731. The UNC Board of Governors must approve proposals for new degree programs. These proposals must
- 74 be prepared according to specified guidelines of the UNC Academic Program Development Procedures.
752. All graduate programs must be submitted to the UNC Graduate Council for review and approval and to
- 76 the UNC Board of Governors for approval.
- 773.
784. Curriculum development and revisions proposals are initiated by the faculty of the academic
- 79 departments by completing one of three standardized curriculum forms: Course Proposal Forms,
- 80 General Education Course Proposal Forms, and Program Proposal Forms.
815. Curriculum proposals are reviewed by the department and signed by the Department Chair.
- 826.
837. In the case of proposals affecting other departments, including the cross-listing of courses, the proposal
- 84 form should be submitted by the originating department. The votes of affected departments are
- 85 recorded, and the Chairs of affected departments also review and sign the proposal. If the cross-listed
- 86 course affects a program in the affected department, the affected department must submit a program
- 87 proposal documenting the change to the program. Crosslisted course numbers must be approved by the
- 88 Registrar's office.
- 898.
909. If the development or change affects Teacher Education, the Teacher Education Committee reviews the
- 91 proposal and the Chair of that Committee signs it. Graduate curriculum proposals and new graduate
- 92 programs must first be approved by the Graduate Council before being submitted to the Curriculum
- 93 Subcommittee. Graduate Teacher Education proposals should be submitted to the Teacher Education
- 94 Committee before being submitted to the Graduate Council.
- 95
- 96 The Registrar, the appropriate Dean, and the Provost and Vice Chancellor for Academic Affairs must also
- 97 sign the proposal.
- 98
- 99 Proposals involving any aspect of the General Education Program are submitted to the Curriculum
- 100 Subcommittee before being submitted to the General Education Subcommittee. The only exceptions are
- 101 proposals involving existing courses with no modifications seeking inclusion in the General Education
- 102 Program.
- 103
- 104 All other proposals are submitted only to the Curriculum Subcommittee.
- 105
- 106 Proposals involving the creation of new courses, revisions to existing courses or course deletions are
- 107 submitted on Course Proposal Forms.
- 108
- 109 Proposals involving new courses must attach sample syllabi to the electronic submission only. (A hard
- 110 copy of the syllabus is not required with the signed form.) New course numbers must be approved by
- 111 the Registrar's office.
- 112
- 113 In instances where an identical change is made to multiple courses, (i.e., deleting or adding prerequisites
- 114 or changing credit hours for courses), one form may be used for multiple proposals. Otherwise, each
- 115 course proposal requires a separate form.
- 116

117 Proposals involving one or more changes to degree programs, tracks, concentrations or minors, etc., are
118 submitted on the Program Proposal Form. Program proposals involving changes to the catalog must
119 attach a revised catalog description to the electronic submission. A hard copy of the revised catalog
120 description must be attached to the signed form.

121
122 Electronic forms are due to the Chair of Curriculum 10 days (two Mondays) prior to the Curriculum
123 meeting, which usually meets on the first Thursday of every month. (The Curriculum Committee does
124 not meet in January and at times adjusts the March meeting date, depending on the spring break
125 schedule.)

126
127 Signed hard copies are due to the Chair of Curriculum on the Monday before the Curriculum meeting. It
128 is the responsibility of the proposing department to ensure that all signatures are acquired prior to
129 delivering hard copies to the Chair of Curriculum.

130
131 A representative from the department submitting the proposals must be present at Curriculum
132 Subcommittee meetings to address any questions or provisions that may arise. The proposal is reviewed
133 and a vote is taken. If the proposal passes, the Chair of the Subcommittee on Curriculum forwards the
134 curriculum matters to the appropriate office or committee.

135
136 The Curriculum Subcommittee is responsible for sending to the Academic Affairs Committee all
137 information pertaining to each individual course that is necessary for the Banner System. The
138 Curriculum Subcommittee shall make recommendations to the Academic Affairs Committee on their
139 adoption, and proposals shall move forward based upon the following policies:

- 140 A. The Subcommittee on Curriculum will treat as minor, and send to the Registrar without Academic
141 Affairs Committee and Senate approval, the following types of proposals: course and program
142 modifications involving changes to prerequisites, course descriptions, course titles, and course
143 deletions; the addition or substitution of one or two electives to a program; and program
144 modifications mandated by changes previously approved by Senate. These will be considered minor
145 changes and forwarded to the Chair of the Academic Affairs Committee for his/her signature, unless
146 the Subcommittee on Curriculum has a compelling reason to forward said revisions to the Academic
147 Affairs Committee.
- 148 B. Approved program modifications involving the addition or deletion of tracks, required courses, or
149 more than two elective options at a time will proceed to the Academic Affairs Committee.
- 150 C. All program modifications described in B, once approved by the Academic Affairs Committee,
151 proceed to the Senate.
- 152 D. All new program proposals (including new degrees, academic majors, concentrations, minors, and
153 certificates), deletions of above programs, new General Education course proposals, and General
154 Education course deletions require Faculty Senate approval.
- 155 E. Individual new courses not part of General Education program require approval by the Academic
156 Affairs Committee but not the Faculty Senate.
- 157 F. All curriculum items not requiring Academic Affairs Committee approval will be reported to the
158 Academic Affairs Committee by the chair of the Subcommittee on Curriculum. All curriculum items
159 not requiring Faculty Senate approval will be reported to the Senate by the chair of the Academic
160 Affairs Committee.

161
162 A representative of the department whose proposal is being considered must be present at all
163 committee meetings beyond the Curriculum Subcommittee level as necessary to address questions and
164 concerns regarding their proposal.

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This multilevel approval process is used to assess the curriculum and the process for curriculum development and revision. In addition, the curriculum and the process are evaluated as part of the institutional assessment made by the Southern Association of Colleges and Schools Commission on Colleges. Curricula of the various departments and the process used to develop curriculum are assessed by those agencies who accredit particular programs, e.g., at UNC Pembroke, the National Council for Assessment of Teacher Education, the State Department of Public Instruction, the National Association of Schools of Music, and the Council on Social Work Education.

Appendix B: Minutes (pending approval)
Subcommittee on Curriculum
Thursday, September 7, 2017
3:30 PM Room 208 University Center

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Members Present: Mary Ash (NSM to 2018), Monika Brown (LETT to 2019), Tracy Cooper (SBS to 2019), Naomi Lifschitz-Grant (ARTS to 2019), J. Porter Lillis, Secretary (SBS to 2018), Jaime Martinez, Chair (LETT to 2018), Elizabeth Normandy (VC of AA Designee), Irina Falls (EDUC to 2018), Roland Stout (NSM to 2019), Nathan Thomas (ARTS to 2018),

Members Absent: Natricia Drake (Acting Registrar), Marian Wooten (EDUC to 2019)

Guests: Geroge Harrison (Mass Comm)

Proposal Details Available in Curriculog System: <https://uncp.curriculog.com/agenda:30/form>

1. Call to Order and Introductions 3:30
2. Adoption of Agenda
3. Approval of Minutes of April 6, 2017 by acclamation

4. Proposal from Livermore Library

4.1 Course Proposal: adjust credit hours for LIB 1000 Intro to Academic Research

4.1 Postponed for later meeting (no representative present)

5. Proposal from the Department of Mass Communication

5.1 Course Proposal: revise title for PRE 3450 Computer-Assisted Editing and Publication Design

5.1 9-0-0 Will be forwarded to Chairs of Academic Affairs and Faculty Senate for Signature

6. Proposal from the Department of Chemistry

6.1 Program Proposal: create a new track in Biotechnology under the B.S. in Chemistry

6.1 Postponed by Chemistry department for later meeting (Submission is being modified within Curriculog.)

7. Unfinished Business

8. New Business

9. Announcements

10. Adjournment 3:39 p.m.

219 Appendix C: Writing Intensive Proposals

220

221 **UNCP Writing-Intensive Program Course Proposal Form**

222

223 Use this form to propose a Writing Enriched course or a Writing in the Discipline course for the
 224 QEP Writing Intensive Program. A Writing Enriched course is one that includes extensive and
 225 intensive instruction in writing. A Writing in the Discipline is a course that teaches students
 226 about the roles and uses of writing in their fields of study. Proposals must be accompanied by
 227 the UNCP Professional Development Application which is found on page three of the course
 228 proposal form.

229

230 PLS 4170 International Security Policy

231 _____

232 Course Prefix/Number Course title

233

234 Department Chair Approval: on hard copy

235

236 **Part One: Department Information**

237

238 Catalog course description:

239

240 This course introduces students to the issues, concepts, and theories relating to security in the
 241 contemporary international system. It examines a number of strategies for addressing problems
 242 related to war and peace in world politics. It considers such topics as the nature and origins of war,
 243 arms control and proliferation, terrorism, and the causes and consequences of a number of
 244 international conflicts, both past and present. Particular attention is paid to the process of
 245 peacekeeping and peacemaking as it relates to international security. PREREQ: PLS 1000 or 1010.

246

- 247 • Curriculum requirements this course meets [for purposes of department planning--check
 248 all that apply]:

249

250 ___ Gen ED X Dept. Major ___ Dept. Minor X Writing Enriched (WE) ___ Writing in the
 251 Discipline (WID)

252

- 253 • Course Format:

254

255 X Lecture ___ Lecture & Lab ___ Seminar ___ Practicum ___ Online ___ Other (please
 256 specify) _____

257

- 258 • Course Frequency:

259

260 ___ Each term ___ Each year X Alternate years ___ Other (please specify)

261 _____

262

263

264 **Part Two: Course Information**

265

266 --> **Attach a copy of the proposed course syllabus.** Specify below how you would envision
267 using the elements listed in your proposed Writing Enriched or Writing in the Discipline course.

268

269 1a. Types of INFORMAL writing [e.g., journals, lab or field notes, logs, ungraded drafts] required
270 in the course and how they will be evaluated for course grade:

271

272 I will utilize informal, low stakes writing in the form of a journal for the course to track
273 international security issues during this new administration.

274

275

276 1b. Estimated # of pages of INFORMAL writing in course: 15-20

277 1c. Describe the learning outcomes expected from the required informal writing:

278

279 Development of critical thinking; learning to analyze policy and determine the positives and
280 negatives of each; understanding that policy is not made in a vacuum.

281

282 2a. Types of FORMAL writing [e.g., essay tests, polished papers] required in the course:

283

284 Two full-essay exams and four complete writing assignments of 5-7 pages each.

285

286 2b. Estimated # of pages of FORMAL writing in course: 25-30

287 2c. Describe the learning outcomes expected from the required formal writing:

288

289 Development of critical thinking; learning how and why foreign policy decisions are made;
290 utilizing case studies to theorize about foreign policy trends.

291

292

293 3. What percentage of the course grade is determined by the INFORMAL writing assignments?

294 13 by the FORMAL writing assignments? 71

295

296 4. How will students receive instruction on discipline-specific writing practices as part of the
297 course? Please indicate where and what discipline-specific writing practices are included.

298

299 I will provide rubrics in the syllabus related to my expectations for writing assignments,
300 combined with discussion in class. Political science tends to be theory based. We will cover
301 many of the basic foreign policy theories and discuss how those apply to writing.

302

303 5. What procedures are to be used in the course for students to receive help as they draft,
304 revise, and edit their polished written work?

305

306 Open office hours; scheduled office hours for each student to discuss their progress; informal
307 peer review, particularly of low-stakes writing, to help them prepare for higher-stakes writing.
308 Mandatory completion of first assignment for draft evaluation and peer review. Each student will
309 be randomly assigned a partner to work with in this regard.

310

311 For Office Use Only

312 WE or WID course designation approved: _____

313

WI Committee Chair

Date

314

315 **PLS 4170-001 WE: INTERNATIONAL SECURITY POLICY (3 credit hours)**

316 [Spring 2018, Oxendine 2250](#)

317
318 **Instructor:** Dr. Kevin S. Freeman

Class Hours: MWF 11:15 AM-12:05 PM

319 **Office:** Oxendine 1309

Office Hours: MW 1:30-3:30 PM and T 9:00-11:00 AM

320 **Phone:** 521-6447

Email: kevin.freeman@uncp.edu

321
322 Course Description: **Conflict--be it war between states, ethnic violence, civil war, or**
323 **terrorist activity--endures, despite immense efforts to end it. How do states cope with**
324 **conflict, minimize future threats, and reduce the risk of insecurity? This class outlines a**
325 **spectrum of solutions states use to manage violent conflict, ranging from strategies that**
326 **individual governments enact largely on their own, such as distribution of power,**
327 **deterrence, or arms control, to those such as collective security and multilateralism that**
328 **are more global in nature. This course also surveys a broad range of issues that**
329 **dominate the security agenda of the 21st century.**

330
331 **The format for class meetings will consist of lectures and extensive opportunities for**
332 **discussion and debate. The instructor will make every effort to relate course concepts to**
333 **the developments taking place in current events.**

334
335 **Course Objectives:** Upon completion of this course, students should be able to:

- 336 1. Compare and contrast the different types and levels of security
- 337 2. Understand why states choose to engage in conflict and/or cooperation
- 338 3. Differentiate between military and non-military security
- 339 4. List and describe various tactical and practical security solutions

340
341 **Texts: There is one required text for this course: *International Security Studies: Theory***
342 ***and Practice* by Hough et al. It also important that the student keep up with current**
343 **events related to and associated with security issues around the world. Thus keeping up**
344 **with current political events via newspapers, magazines and/or television is a necessity.**
345 **I recommend subscribing to *The Economist*, but it is not required. I reserve the right to**
346 **assign additional readings as necessary. This course will be much more enjoyable (and**
347 **informative) for both you and your instructor if you are prepared for class discussion.**

348
349 **Attendance: Attendance is expected in this class. It will be very difficult to make a decent**
350 **grade in this class without regular attendance--many of the test questions will be directly**
351 **from lecture material and may not necessarily be found in your text.**

352
353 If a student is representing the University in an official capacity (e.g.: academic conference,
354 student government, course field trips, ROTC events, athletics, band) at an official University-
355 sanctioned event, that absence shall be excused. Students are responsible for all coursework
356 missed and must make up the work within three university business days after the student
357 returns to campus. Any student who anticipates missing more than 15% of the course should
358 not enroll in the course without prior approval from the instructor.

359
360 It is the responsibility of the student to communicate with the professor or instructor about
361 classes missed for any reason, including University sanctioned events. Students must provide
362 official documentation of proposed University-sanctioned events that will result in excused
363 absences during the first week of each semester. Prior written documentation must be provided
364 for each excused absence.

365

366 **Religious Holiday Policy:** The University of North Carolina at Pembroke has a legal and moral
367 obligation to accommodate all students who must be absent from classes or miss scheduled
368 exams in order to observe religious holidays; we must be careful not to inhibit or penalize these
369 students for exercising their rights to religious observance. To accommodate students' religious
370 holidays, each student will be allowed two excused absences each semester with the following
371 conditions:

- 372
- 373 1. Students who submit written notification to their instructors within **two weeks** of the
374 beginning of the semester shall be excused from class or other scheduled academic
375 activity to observe a religious holy day of their faith. Excused absences are limited
376 to two class sessions (days) per semester.
 - 377 2. Students shall be permitted a **reasonable** amount of time to make up tests or other
378 work missed due to an excused absence for a religious observance. Please see me
379 to discuss this.
 - 380 3. Students will not be penalized due to absence from class or other scheduled
381 academic activity because of religious observances.
- 382

383 A student who is to be excused from class for a religious observance is not required to provide a
384 second- party certification of the reason for the absence. Furthermore, a student who believes
385 that he or she has been unreasonably denied an education benefit due to religious beliefs or
386 practices may seek redress through the student grievance procedure.

387

388 **Tardiness: Do not make it a habit of arriving into my class late. While it happens to**
389 **everyone on occasion, systematic tardiness is unprofessional and, frankly, disrespectful.**
390 **I will give clicker questions at the very beginning of most classes—tardy students will**
391 **lose participation points as a result.**

392

393 **Classroom Etiquette: While as a whole I have minimal in-classroom requirements, I do**
394 **expect some degree of respect to be shown in the classroom environment. This includes**
395 **having your cell phone OFF or on VIBRATE when in class, not bringing your breakfast or**
396 **lunch into class, not studying for another test while in my class, and not talking when**
397 **others are. Systematic violations of this can result in a reduction of grade and/or a**
398 **dismissal from the classroom. This is a university-level class, and you will be treated as**
399 **adults. As such, you will be expected to act like adults.**

400

401 **Laptops: Laptops are allowed and encouraged in this class. However, I expect you to use**
402 **them for class-related activities as opposed to checking your Facebook page or tweeting**
403 **about how cool an instructor I am.**

404

405 **Office Visits:** You are more than welcome to meet with me at any time that is mutually
406 convenient. My office hours are listed at the top of this syllabus. If these times are not
407 convenient to you, we can easily arrange some other time. Do not assume that office visits are
408 only to address problems you might be having in class. I'm happy to talk about whatever you
409 like, including any difficulties you may be having in class.

410

411 **ADA Statement:** Federal laws require UNCP to accommodate students with documented
412 learning, physical, chronic health, psychological, visual or hearing disabilities.

413

414 In post-secondary school settings, academic accommodations are not automatic; to receive
415 accommodations, students must make a formal request and must supply documentation from a
416 qualified professional to support that request. Students who believe they qualify must contact

417 the Accessibility Resource Center (ARC) in DF Lowry Building, Room 107 or call 910-521-6695
418 to begin the accommodation process. All discussions remain confidential. Accommodations
419 cannot be provided retroactively. More information for students about the services provided by
420 ARC and the accommodation process may be found at the following link:
421 <http://www.uncp.edu/arc>
422

423 This publication is available in alternative formats upon request. Please contact the
424 Accessibility Resource Center in the D. F. Lowry Building, 521-6695.
425

426 **Academic Resource Mentoring** in the Academic Support Center supports the UNV 1100
427 course and provides mentoring to any student, addressing their unique academic concerns to
428 guide them in achieving their personal academic goals; contact jennifer.bruner@uncp.edu or
429 910-775-4391.
430

431 **NC-HCAP:** Located in Jacobs Hall Suite F, the Health Careers Access Program offers
432 assistance to students seeking to be employed in healthcare through test preparation
433 workshops, course tutoring, guidance during the application process for healthcare programs,
434 job shadowing, internships, and advisement; contact hcp@uncp.edu or 910-521-6673.
435

436 **The Resource Learning Lab** in the Academic Support Center offers 1) computer based, self-
437 paced tutoring in basic writing skills, basic reading comprehension, and word problem
438 dissection; 2) DVDs such as Note Taking, Critical Thinking, Problem-Solving and Time
439 Management, which are free and available to all students; contact mark.hunt@uncp.edu or 910-
440 775-4393.
441

442 **Striving Toward Academic Recovery:** The STAR program in the Academic Support Center is
443 intended for students who are returning from an academic and/or financial aid suspension,
444 assisting them to get back on track academically so that they can be successful at UNCP;
445 contact courtney.walters@uncp.edu or 910-775-4408.
446

447 **TRIO programs:** This federally-funded office provides eligible students with one-on-one and
448 group tutoring, personal counseling, and assistance with applying for financial aid, in Jacobs
449 Hall suites A and B; contact trio@uncp.edu or 910-521-6242.
450

451 **Transfer Transition Office:** The Transfer Transition Office, located in Jacobs Hall Suite H,
452 provides student support services and academic resources for students transferring from
453 community colleges and other institutions of higher education to the campus of UNC Pembroke;
454 contact transfer.transition@uncp.edu or 910-521-6269.
455

456 **Tutoring:** The tutoring program of the Academic Support Center helps students achieve their
457 academic goals by offering group or individual tutoring in all General Education and many
458 upper-level courses. Students can sign up at www.uncp.edu/asc/study/tutoring_request.html or
459 contact jennifer.mcneill@uncp.edu or 910-775-4311.
460

461 **The University Writing Center** The University Writing Center, located in D.F. Lowry 308 and
462 available online at www.uncp.edu/writing, is a peer-to-peer tutoring service where UNCP
463 students can seek assistance with written assignments at any stage during the writing process,
464 from brainstorming ideas to drafting, revising, and editing.
465

466 **Grading: There are a number of graded components required in this course.**
467

468 **Exams:** Two essay exams, neither of which is comprehensive.

469
470 **Quizzes:** Five multiple-choice quizzes, consisting of 20 questions each, that will be given
471 at the beginning of the class on the dates mentioned later in this syllabus. I will drop the
472 lowest of these quiz grades.

473
474 **Writing Assignments:** Four writing assignments, each covering a particular topic related
475 to International Security as listed later in the syllabus. These are “Devil’s Advocate”
476 papers where you are asked to argue both sides of a particular problem. Guidelines and
477 a paper rubric are also included at the end of this syllabus. I will drop the lowest of these
478 paper grades. NOTE: All of you are REQUIRED to do the first writing assignment.

479
480 **Peer Analysis:** Each of you will be partnered with another student in the course. For
481 your first paper, you will be required to turn in a first draft which will be reviewed and
482 analyzed by your partner, and you will do the same for your partner. These partnerships
483 will be determined randomly by me.

484
485 **Journal:** You will be responsible for maintaining and updating a weekly journal
486 expressing your interest and analysis in current American foreign policy issues. This
487 must be turned in once per week (every Monday) and should be a minimum of 300 words
488 per week. Failure to turn in the journal on time will result in a grade of zero for that week.

489		
490	Midterm Exam.....	100 points
491	Final Exam.....	100 points
492	4 Multiple Choice Quizzes (20 points each).....	80 points
493	3 “Devil’s Advocate” Papers (75 points each).....	225 points
494	Peer Review.....	20 points
495	Journal Entries (5 points per week).....	75 points
496	TOTAL	600 points

497
498 Grading Scale: 558-600=A; 540-557=A-; 522-539=B+; 498-521=B; 480-497=B-; 462-479=C+;
499 438-461=C; 420-437=C-; 402-419=D+; 378-401=D; 360-377=D-; < 360=F

500
501 **Extra Credit:** I do give opportunities for extra credit throughout the semester. However, these
502 opportunities are planned and given by me. Please do not ask for extra credit outside of what I
503 offer to the course as a whole. I may also offer other opportunities as they present themselves.

504
505 **Make-up Policy:** All graded assignment dates are clearly indicated on this syllabus. If these
506 dates do not fit into your schedule, you should consider dropping this course or taking a different
507 section. **As such, no make-up exams will be given except in cases of serious,**
508 **documented emergencies or official university-sanctioned events.** The documentation
509 must have contact information that allows me to call and verify your story. Vacations, birthdays,
510 oversleeping, eye doctor appointments, and/or hangovers do not qualify as emergencies. Note
511 that what qualifies as a valid excuse is at the discretion of the instructor.

512
513 **Academic Dishonesty:** Academic dishonesty of any variety will not be tolerated. Academic
514 dishonesty includes but is not limited to, cheating on an exam, unauthorized collaboration on an
515 assignment, and plagiarism. Any instance coming to the attention of the instructor will result in
516 the assignment of a zero grade for the assignment at a minimum, and notification of appropriate
517 Deans. In order to ensure that you understand what constitutes plagiarism and academic
518 dishonesty, please read the complete description of the UNCP policy on academic dishonesty,

519 which is available in the student handbook and online at [http://www.uncp.edu/student-](http://www.uncp.edu/student-life/student-services/student-conduct/academic-honor-code)
 520 [life/student-services/student-conduct/academic-honor-code](http://www.uncp.edu/student-life/student-services/student-conduct/academic-honor-code).

521
 522 **Disclaimer:** We all know how boring long, droning lectures can be. Teachers can learn a few
 523 things from class discussion, too. But above all, I want this class to be both FUN and
 524 INTERESTING for all of us!

525
 526 **It is your responsibility to keep up with when assignments are due and when tests and**
 527 **quizzes might be given. Just because I don't announce a test or quiz ahead of time does**
 528 **not mean that I am going to push it back. To be safe, check your syllabus regularly.**
 529

530

Part 1: Approaches to and Types of Security

531
 532

Date	Subject	Readings
Jan 11	Course Introduction and Syllabus Analysis	---
Jan 13-15	Security in International Relations	Chapter 1, Lectures
Jan 18	No Class! MLK, Jr. Holiday	---
Jan 20-22	Realism and Idealism	Chapter 2
Jan 25-27	Less Mainstream Approaches	Chapters 3-6 (skim)
Jan 29-Feb 1	War in International Politics	Chapter 7
Feb 3-5	Globalization and Failed States	Chapter 8
Feb 8	Transnational Crime	Chapter 16
Feb 10	Environmental Security	Chapter 15
Feb 12	Food Security	Chapter 17

533
 534 **February 15: Midterm Examination #1**

535
 536

Part 2: Security Issues

537
 538

Date	Subject	Readings
Feb 17-22	Coercive Diplomacy	Lectures
Feb 24-29	Weapons of Mass Destruction	Chapter 9
Mar 2	Religion and International Conflict	Chapter 12
Mar 4	Private Military and Security Companies	Chapter 13
Mar 7-11	No Class! Spring Break	---
Mar 14-21	Terrorism	Chapter 11, Lectures

539
 540 **March 23: Midterm Examination #2**

541
 542

Part 3: Security Solutions

543

Date	Subject	Readings
Mar 25	No Class: Good Friday	---

Mar 28-30	Humanitarian Intervention	Lectures
Apr 1	No Class: Instructor out of Town	---
Apr 4-6	The United Nations and Collective Security	Chapter 20, Lectures
Apr 8-11	NATO and Collective Defense	Chapter 21, Lectures
Apr 13-15	Other Regional Security Organizations	Chapter 22
Apr 18-20	Deterrence and Arms Control	Chapter 10
Apr 22-27	Conflict Resolution through Diplomacy	Lectures

544
545 Here are the dates for the assigned quizzes. They will be given at the end of class and should
546 take no longer than 10 minutes each. They will consist of 20 multiple-choice questions each.
547

548 **February 1 February 17 March 4 April 6 April 25**
549

550 The four writing assignments are due on the days listed below. You will have approximately
551 three weeks to work on each assignment. Paper guidelines are listed and discussed in the next
552 pages.
553

554 **January 20 (Due February 10)**
555 **February 26 (Due March 28)**
556 **March 28 (Due April 25)**
557 **(paper 4)**
558

559 Important Dates

560
561 January 15: Last Day to Add/Drop without Penalty
562 March 1: Graduation Applications Due
563 March 7-11: Spring Break
564 March 18: Last Day to Withdraw
565 March 21-25: Advising Week
566 March 28: Preregistration for Fall Begins
567 May 6: Final Exam (8:00 am)
568
569

Notice to All Students

Leave the excuses at the door

If you didn't do an assignment, just admit it

If you don't understand an assignment, ask for help

If you didn't study for a test, accept the grade and resolve to do better (with my help if necessary) next time.

If you refuse to follow my rules, accept the consequences.

I am here to teach you, to inspire you, and to help you grow. The rest is up to you.

570 **Paper Guidelines**

571 As mentioned earlier, there will be three short writing assignments given to you at various points
 572 during the semester. Of these three, only your two highest graded will count towards your final
 573 semester grade. Each of these papers should be approximately 1200-1500 words, NOT
 574 including bibliographies, footnotes, graphs, or any other supplemental materials. Each of these
 575 papers counts 60 points.

576 Late submissions of any of these paper components will be docked **TEN POINTS PER DAY**
 577 that they are late, beginning with when I begin lecturing for that day. In other words, if I have
 578 begun class on September 24th, and you come in late that day with your paper, it counts as
 579 being late. There will be no exceptions to this—if you are worried, turn it in early.

580 The topic of each paper will be given to you on the day it is handed out to you. It will be partially
 581 subjective, partially objective, but should be firmly based in political theory and facts regardless.

582 **Composition:** Papers are to be typed, double-spaced, and with 1" margins all around. You
 583 must use either Arial or Times New Roman font, 12 point. A separate title page is not
 584 necessary. Your pages must also be numbered. Failure to abide by these rules will result in a
 585 10-point deduction.

586
 587 **Citations:** As this is a research paper, I expect you to use citations in your work. To avoid
 588 plagiarism, do not paraphrase or cite passages from published works or ideas of people other
 589 than yourself without giving full credit to them. When quoting verbatim, use quotation marks
 590 and cite the exact page number. If an instance comes up where you are unsure whether or not
 591 you should cite, play it safe and cite.

592
 593 There are three separate ways to cite, and I am not particular of which one you use so long as
 594 you are consistent and follow one of the accepted manuals of style. You can use formal
 595 footnotes, which appear at the bottom of each page; you can use formal footnotes but put all of
 596 them at the end of the paper; or you can parenthetical citations. If you are unsure about proper
 597 citations or do not know what a manual of style is, I would advise seeing me or the Writing
 598 Center immediately. In all cases, a formal bibliography is required at the end of your paper.

599
 600 Failure to cite properly can result in penalties ranging from ten points to an automatic zero,
 601 depending on the severity of the violation.

602 **Rubrics**

603 Students sometimes do not understand how a paper is graded. The explanation of grading here
 604 derives from standards for *Advanced Placement* exams, and is called a "grading rubric". Note
 605 that this is the standard expected of good college students. It outlines basic elements of a good
 606 paper, and attaches grades to them. The basic grade of a paper derives from its content. The
 607 difference between the higher and lower grades here may depend on issues such as
 608 presentation.
 609

610 **The Superior Paper (A/A-)**

611 **Thesis:** Easily identifiable, plausible, novel, sophisticated, insightful, crystal clear.

612 **Structure:** Evident, understandable, appropriate for thesis. Excellent transitions from point
613 to point. Paragraphs support solid topic sentences.

614 **Use of evidence:** Primary source information used to buttress every point with at least one
615 example. Examples support mini-thesis and fit within paragraph. Excellent integration of
616 quoted material into sentences.

617 **Analysis:** Author clearly relates evidence to "mini-thesis" (topic sentence); analysis is fresh
618 and exciting, posing new ways to think of the material.

619 **Logic and argumentation:** All ideas in the paper flow logically; the argument is identifiable,
620 reasonable, and sound. Author anticipates and successfully defuses counter-arguments;
621 makes novel connections to outside material (from other parts of the class, or other classes)
622 which illuminate thesis.

623 **Mechanics:** Sentence structure, grammar, and diction excellent; correct use of punctuation
624 and citation style; minimal to no spelling errors; absolutely no run-on sentences or comma
625 splices.

626 **The Good Paper (B+/B)**

627 **Thesis:** Promising, but may be slightly unclear, or lacking in insight or originality.

628 **Structure:** Generally clear and appropriate, though may wander occasionally. May have a
629 few unclear transitions, or a few paragraphs without strong topic sentences.

630 **Use of evidence:** Examples used to support most points. Some evidence does not support
631 point, or may appear where inappropriate. Quotes well integrated into sentences.

632 **Analysis:** Evidence often related to mini-thesis, though links perhaps not very clear.

633 **Logic and argumentation:** Argument of paper is clear, usually flows logically and makes
634 sense. Some evidence that counter-arguments acknowledged, though perhaps not
635 addressed. Occasional insightful connections to outside material made.

636 **Mechanics:** Sentence structure, grammar, and diction strong despite occasional lapses;
637 punctuation and citation style often used correctly. Some (minor) spelling errors; may have
638 one run-on sentence or comma splice.

639 **The Borderline Paper (B-/C+)**

640 **Thesis:** May be unclear (contain many vague terms), appear unoriginal, or offer relatively
641 little that is new; provides little around which to structure the paper.

642 **Structure:** Generally unclear, often wanders or jumps around. Few or weak transitions,
643 many paragraphs without topic sentences.

644 **Use of evidence:** Examples used to support some points. Points often lack supporting
 645 evidence, or evidence used where inappropriate (often because there may be no clear
 646 point). Quotes may be poorly integrated into sentences.

647 **Analysis:** Quotes appear often without analysis relating them to mini-thesis (or there is a
 648 weak mini-thesis to support), or analysis offers nothing beyond the quote.

649 **Logic and argumentation:** Logic may often fail, or argument may often be unclear. May not
 650 address counter-arguments or make any outside connections.

651 **Mechanics:** Problems in sentence structure, grammar, and diction (usually not major).
 652 Errors in punctuation, citation style, and spelling. May have several run-on sentences or
 653 comma splices.

654 **The "Needs Help" Paper (C/C-)**

655 **Thesis:** Difficult to identify at all, may be bland restatement of obvious point.

656 **Structure:** Unclear, often because thesis is weak or non-existent. Transitions confusing and
 657 unclear. Few topic sentences.

658 **Use of evidence:** Very few or very weak examples. General failure to support statements,
 659 or evidence seems to support no statement. Quotes not integrated into sentences; "plopped
 660 in" in improper manner.

661 **Analysis:** Very little or very weak attempt to relate evidence to argument; may be no
 662 identifiable argument, or no evidence to relate it to.

663 **Logic and argumentation:** Ideas do not flow at all, usually because there is no argument to
 664 support. Simplistic view of topic; no effort to grasp possible alternative views.

665 **Mechanics:** Big problems in sentence structure, grammar, and diction. Frequent major
 666 errors in citation style, punctuation, and spelling. May have many run-on sentences and
 667 comma splices.

668 **The Failing Paper**

669 Shows obviously minimal lack of effort or comprehension of the assignment. Very difficult to
 670 understand owing to major problems with mechanics, structure, and analysis. Has no
 671 identifiable thesis, or utterly incompetent thesis.

672

673

674

675

676

UNCP Writing-Intensive Program Course Proposal Form

677 Use this form to propose a Writing Enriched course or a Writing in the Discipline course for the
678 QEP Writing Intensive Program. A Writing Enriched course is one that includes extensive and
679 intensive instruction in writing. A Writing in the Discipline is a course that teaches students
680 about the roles and uses of writing in their fields of study. Proposals must be accompanied by
681 the UNCP Professional Development Application which is found on page three of the course
682 proposal form.
683
684

685
686 PHY 4200/4210 Advanced Laboratory I&II
687 Course Prefix/Number Course title
688
689

690 Department Chair Approval _____
691

Part One: Department Information

692
693 Catalog course description:
694

PHY 4200/4210. Advanced Laboratory I & II

Modern physics experiments available from several areas. Choices include: atomic physics, NMR, nuclear physics, radio astronomy, optics and spectroscopy. Credit, 3 semester hours. PREREQ: Consent of Instructor.

696
697
698
699
700 • Curriculum requirements this course meets [for purposes of department planning--check
701 all that apply]:
702

703 ___ Gen ED Dept. Major Dept. Minor ___ Writing Enriched (WE) Writing in the
704 Discipline (WID)
705

• Course Format:

706
707 ___ Lecture Lecture & Lab ___ Seminar ___ Practicum ___ Online ___ Other (please
708 specify) _____
709

• Course Frequency:

710
711 ___ Each term ___ Each year Alternate years ___ Other (please specify)
712 _____
713
714
715
716

717 **Part Two: Course Information**

718

719 --> **Attach a copy of the proposed course syllabus.** Specify below how you would envision
720 using the elements listed in your proposed Writing Enriched or Writing in the Discipline course.

721

722 1a. Types of INFORMAL writing [e.g., journals, lab or field notes, logs, ungraded drafts] required
723 in the course and how they will be evaluated for course grade:

724

725 40% - Journal details in laboratory notebook of every experiment (at least five experiments – 100 pages
726 including figures, tables, and graphs)

727

728

729 1b. Estimated # of pages of INFORMAL writing in course: 100

730

731 1c. Describe the learning outcomes expected from the required informal writing:

732

733 Nearly every single learning outcome bullet listed in QEP Student Learning Outcomes (some are entirely
734 redundant) will be addressed by the informal writing assignments.

735

736

737 2a. Types of FORMAL writing [e.g., essay tests, polished papers] required in the course:

738

739 15% - Two peer reviewed reports (revised through peer feedback and then graded by instructor –
740 approximately 5 to 8 pages each)

741

742 20% Midterm Poster Presentation (equivalent to about 4 or 5 pages of writing)

743

744 25% Final Research Paper (> 12 pages)

745

746 2b. Estimated # of pages of FORMAL writing in course: >25

747

748 2c. Describe the learning outcomes expected from the required formal writing:

749

750 Nearly every single learning outcome bullet listed in QEP Student Learning Outcomes (some are entirely
751 redundant) will be addressed by the formal writing assignments.

752

753

754 3. What percentage of the course grade is determined by the INFORMAL writing assignments?

755 40% by the FORMAL writing assignments? 60%

756

757 4. How will students receive instruction on discipline-specific writing practices as part of the
758 course? Please indicate where and what discipline-specific writing practices are included.

759

760 Note the “feedback chain” described below, particularly the central importance of the journal (i.e. lab
761 notebook)

762

763 A) Lab Notebooks (frequent and intensive grading will serve as feedback)

764

765 B) Two peer reviewed reports

766 i) feedback from lab notebook

767 ii) revision after peer review

- 768 iii) instructor graded
 769
 770 C) Midterm Poster
 771 i) feedback from lab notebook
 772 ii) feedback from peer reviewed reports
 773 iii) revision upon instructor feedback from rough draft
 774 iv) instructor graded
 775
 776 D) Final Research Paper
 777 i) feedback from lab notebook
 778 ii) feedback from peer reviewed reports
 779 iii) revision upon instructor feedback from rough draft
 780 iv) instructor graded

781
 782
 783

784 5. What procedures are to be used in the course for students to receive help as they draft,
 785 revise, and edit their polished written work?

786

- 787 ○ Nearly all QEP Student Learning Objectives are to be incorporated.
- 788 ○ Lab Notebooks, reviewed intensively, will provide the major source of feedback.
- 789 ○ The revision process for each assignment is described adequately in the preceding question
 790 (number 4) above).
- 791 ○ Utilizing the laptop projector hands-on writing tutorials addressing formatting and equation
 792 editing and will be provided intermittently as needed throughout the semester.
- 793 ○ Many previous research posters (I possess a library of over 100) will provide a roadmap and
 794 template for the midterm poster presentation.
- 795 ○ Professionally reviewed journal articles (e.g. [JURP](#), [PT](#), [AJP](#), [PE](#)) will provide examples of how
 796 to write the final research paper.
- 797 ○ Office hours!

798
 799
 800
 801
 802

803 For Office Use Only

804 WE or WID course designation approved: _____

805

WI Committee Chair

Date

806

807

Tentative Syllabus: Advanced Experimental Physics (PHY 4200)

Three credit hours (provides credit as a "Writing in the Discipline" course)

810

Location: Sci 3260

Time: TBA

811

812

813 Instructor: Dr. Bill Brandon

814 Office: Oxendine Science – Rm. 3208

815 Email: william.brandon@uncp.edu

816 Phone: 910.775.4289

817 Office Hours: Office hours: TBD

818 Literature: Textbook chapters, videos, lab manuals, and journal references will be provided in **Blackboard**
 819 Useful Links: <http://tpt.aapt.org/> → peer reviewed publications (report format)
 820 <http://ajp.aapt.org/> → peer reviewed publications (report format)
 821

Course Objective	Develop intermediate and advanced physics experimental skills, including laboratory notebook maintenance, report writing and data analysis - exploring such topics as: mechanics, waves and optics (nonlinear, electro- & magneto-optics), spectroscopy, atomic physics, nuclear physics, and electronics. See Appendix B for a list of potential experiments.
Prerequisite	PHY 1510/1570 or 2010/2070 and three additional classes numbered 2xxx and above.
Lab Notebooks <i>Experimental Physics Journals</i> “Writing in the Discipline”	A lab notebook for each experiment must be maintained and updated on a constant (near daily) basis. The notebooks will be spot checked weekly to ensure progress and they must be submitted for thorough grading upon completion of the respective experiment. One cannot overemphasize the importance of a properly maintained and formatted lab notebook. Thorough descriptions of the experiments provide a solid foundation for a final formal writing assignment – whether it is a poster, oral presentation or paper. You can expect to produce approximately 100 pages, including the figures, tables, and graphs by the end of the semester. When the lab notebooks are returned after grading it is absolutely essential that you review the comments immediately. The comments should serve as feedback to help you achieve incremental improvement as a scientific writer. We will embrace the notebooks as our “daily writing journals”. See Appendix A for details.
Peer-Reviewed Reports “Writing in the Discipline”	Two formal writing assignments, focusing on descriptive writing and process analysis, and involving theory, procedure and instrumentation will be written and peer reviewed prior to grading. The theory portion will require extensive equation editing. These assignments, consisting of approximately 5-8 pages each, will provide a solid foundation for the midterm poster project and the final formal report, respectively.
Poster Presentation “Writing in the Discipline”	The midterm project will consist of a formal poster presentation (softcopy) outlining an experiment of your choice. The experiment is to be approached as a research topic. Numerous examples (both good and bad), along with templates, will serve as a guide. A rough draft must be submitted three days prior to the final poster due date. Outstanding work will qualify as a presentation at an appropriate venue. Potential topics can be found in Appendix B .
Research Paper “Writing in the Discipline”	The final project will entail a formal report on an advanced experiment of your choice. The report must be in a format acceptable to various peer reviewed journal articles. Selected journal articles will provide appropriate examples. A rough draft must be submitted one week prior to the final paper due date (finals week). Excellent papers may be submitted to an appropriate journal for publication. The paper should be at least twelve pages in length including figures, and tables, graphs. See Appendix A for more details. Potential research topics can be found in Appendix B .
Student Learning Outcomes	Successful completion of the writing assignments will ensure that nearly every single outcome listed in Appendix C: QEP Student Learning Outcomes is addressed. This document will serve as one of several writing tools for the students. In addition, the document will serve as the foundation of the writing specific rubrics for the individual assignments.
Grading Breakdown	Lab Notebooks: 40% (submitted upon completion of each experiment) Two Peer Reviewed Theory and Procedure Assignments: 15% (7.5% each) Midterm Research Poster: 20% Final Research Paper: 25%

Grading Scale	A >93 A- 90-93 B+ 87-89 B 83-87 B- 80-82 C+ 77-79 C 73-77 C- 70-72 D+ 67-69 D 63-67 D- 60-62 ---an F is given for a grade less than 60.
Attendance Policy	You are allowed one absence and you are required to make arrangements to perform the activities missed. More than one unexcused absence is grounds for failing the course. Tardiness will adversely affect your grade – significantly!

822

823 *Your instructor reserves the right to amend the syllabus as needed depending on work accomplished and needs of
824 the class.

825

826

Miscellaneous Syllabus Information (hyperlinks)

Course Load and Grading Policies	Honor Code	Religious Holiday Policy	Applied Physics Degree Requirements
Accessibility Resource Center	Academic Calendar Spring 2017	Spring 2017 Exam Schedule	Tutoring

827

828

829 Federal laws require UNCP to accommodate students with documented learning, physical, chronic health, psychological, visual
830 or hearing disabilities. In post-secondary school settings, academic accommodations are not automatic; to receive

831 accommodations, students must make a formal request and must supply documentation from a qualified professional to support
832 that request. Students who believe they qualify must contact the Accessibility Resource Center (ARC) in DF Lowry Building,

833 Room 107 or call 910-521-6695 to begin the accommodation process. All discussions remain confidential. Accommodations
834 cannot be provided retroactively. More information for students about the services provided by ARC and the accommodation

835 process may be found at the following link: <http://www.uncp.edu/arc>

836

837

Appendix A

838

839

Laboratory Notebooks

840

841

Laboratory Notebooks: You will need at several four quad-ruled notebooks (paperback).

842

843• At least four notebooks are needed for miscellaneous activities, mostly consisting of lab work, background notes,
844 example problems, homework, etc. Less formal notes from various activities should be carefully documented

845• At least one notebook for the midterm project, which will evolve into a formal midterm research paper.

846• At least one notebook for the final project, which will evolve into a formal final research paper.

847

848

Laboratory Notebook Checklist (General Contents of the notebooks)

8501) The covers of each notebook must contain the title of the experiment, your name, course number, meeting place and
851 meeting time.

8522) You must reserve several pages at the front of the notebook for a ToC (Table of Contents).

8533) The ToC must be updated continuously with appropriate page numbers of the content described.

8544) The pages of your notebook are to be numbered as you complete each lab activity in accordance with the ToC.

8555) You must keep good notes, using a pen, for each activity. You are NOT allowed to erase any contents from your
856 notebook. You are allowed to put a line through those contents you *suspect* as faulty or irrelevant, state why, and
857 initial. The line should be sketched in a manner so that the contents may still be read

8586) The lab notebooks in support of the formal research papers (project oriented) should include “in-situ” notes consisting of
859 the pre-lab notes acquired from relevant lecture or other materials and thorough recording of the investigations.

860

861 **Formal Reports Format** (Referred journal articles in, for example, [AJP](#) and [PT](#) provide acceptable
862 formats)

863

8641) **TITLE:** You must include an appropriate **title**. Include your name (underlined) along with the names of all lab
865 partners.

866
867) **ABSTRACT:** (i.e. a summary of the contents of the report)

869) **THEORY:** A *brief theory* section relating the most relevant mathematics and salient physical concepts is required.
870 You must use an appropriate equation editor for all mathematical presentaiton.

872) **PROCEDURE/INSTRUMENTATION:** Sections discussing the procedure and the instruments used, including
873 manufacturers and serial numbers, must be included. I frown upon the “black-box” mentality when it can be
874 avoided with a little effort. **Explicitly detailed apparatus figures and/or schematics are absolutely essential!**

876) **RESULTS:** The **results** of your measurements and/or observations are to be discussed along with the appropriate
877 **graphs** and **example calculations**. The procedure section **must also include an explicit prescription describing**
878 **how the graphical syntax (fitting algorithms) is related to the theory and the measurements you obtained.** I
879 recommend that when you begin taking data one of the group members should have spreadsheet and graphical
880 software “up and running”.

882 **Tables/Graphs:** In the results section we might find...

883 5a) Well-constructed **data tables** including **column headers and units**, if necessary. Each data run must also
884 include a calculation. All calculations should be averaged with standard deviation appropriately.

885 5b) Well-constructed **graphs:** **The graph axes** must have appropriate **labels:** variable name, symbol (units)
886 Example: **distance, D (m)** – Note the italicized Times New Roman font for the variable

887 5c) **Graphs must be related to the appropriate calculations** whether the graph is a simple linear fit or a more
888 complex fitting algorithm. All variables of interest (slopes, fitting parameters, etc) should include **units-** if indeed
889 they have units. **You must explicitly convey how the graphical analysis relates to the theory.**

891) **CONCLUSION:** It is very important that you include a thorough **conclusion**. Within the conclusion you should also
892 *briefly* comment on the **sources of error** and decide whether the errors are **random (resulting from unavoidable**
893 **uncertainties of in measurements)** or **systematic (poorly calibrated equipment, inadequate approximations or**
894 **assumptions, inconsistent units, etc...)**. The phrase “human error” should never be used. We will use the formal
895 theory of propagated uncertainties in the error analysis. If you understand the propagated uncertainties then the
896 major sources of error are obvious.

898 Appendix B

900 Checklist of Suggested Topics to Choose From

902 **Highly structured experiments (20% Lab Notebooks, 7.5% Peer Reviewed Paper):**

Uncertainties (using experiments- Simple Pendulum, Ohm's Law, Refraction of Light)	
Large Angle Pendulum	
Oscillations (SHO) and Driven Oscillations (Resonance)	
Waves (longitudinal- sound) / FFTs for open-open and open-closed pipes	
Waves (transverse -string) / FFTs	
Homework Lab (dimensional analysis)	
Coulomb Balance	
Current Balance	
e/m for electron	

903

904 **Investigations - midterm project (20% Poster)**

Coulomb & Current Balance: μ_0 and ϵ_0 – and hence speed of light and vacuum impedance	
Speed of Signals (Free Space Speed of Light and BNC Pulse Transmission)	
Automated String Apparatus to Investigate Amplitude Resonance and Phase	
Automated Driven Oscillator to Investigate Amplitude Resonance and Phase	
Automated Resonance Tube to Investigate Amplitude Resonance and Phase	
Photoelectric Effect Utilizing Phase Sensitive Detection	
Michelson-Morley Interferometer	

905
906 →Spring Break←

907
908 **Advanced level experiments (20% Lab Notebooks and 7.5% Peer Reviewed Paper):**

Homework Lab (data mining: Kepler's 3 rd Law, <i>Data Thief</i> , LED specifications)	required
Polarization "Trinity" (Chirality, Faraday Rotation and Berry Phase) choose one: Polarization & Chirality Polarization & Faraday Rotation Polarization & Berry Phase	
Steady State Characterization of LEDs	
Hall Effect (design and build a Gauss probe)	
Amplitude Splitting Interferometry (choose one) Michelson Interferometer Twyman-Green Interferometer Fabry-Perot Interferometer	
Quantum Dots	
Diode Laser Characteristics	

909
910 **Advanced level investigations - finish before the final (20% Formal Paper)**

Electro-optics: LEDs, Laser Diodes, Laser Modulation, Photodiodes, Autobalanced Photodetection, Feedback Stabilized Diode Lasers	
Quantum Wave Optics, Atomic Spectra and Quantum Dots	
Wave Optics: Amplitude- vs. Wavefront- Splitting Interferometry	
Gauss Probe and Hall Effect (in both DC and AC magnetic fields)	
Chirality, Faraday Effect and Berry Phase	
FFT: PC-Soundcard, FTIR, NMR	
Luminescence: Electro- / Photo- / Chemo- / and Bio-	
Overview of Phase Sensitive Detection and Noise (the lock-in amplifier)	
Shot Noise Limited Autobalanced Photodetection	

911
912
913 **APPENDIX C**

QEP STUDENT LEARNING OBJECTIVES

917 A1. Rhetorical Knowledge—General Competency

918 Students who complete courses in the Writing Intensive Program will be able to:

- 919 • Articulate the purpose of a piece of writing and effectively organize the writing in light of
- 920 that purpose.
- 921 • Exhibit consistency in focus and reasoning. Details will be of sufficient quality and
- 922 quantity to support thesis.
- 923 • Students will demonstrate the ability to develop content in which the central idea/purpose
- 924 is clearly stated, the content is accurate and relevant, and credible support is provided.
- 925 • Adopt appropriate voice, tone, and level of formality with attention to appropriate
- 926 audience. Exhibit skills in style and fluency, including voice and vocabulary appropriate
- 927 to audience, discipline and task.
- 928 • Use conventions of format and structure appropriate to the rhetorical situation. Exhibit
- 929 structural integrity in organization and development. This will include a clear thesis and

930 purpose; logical arrangement of ideas; and appropriate opening, conclusion, and
 931 transitions.

932

933 A2. Rhetorical Knowledge---Disciplinary/Professional Competency

934 Students who complete courses in the Writing Intensive Program will be able to:

- 935 • Understand and employ the main features and purposes of writing in the relevant
- 936 discipline.

937

938 B1. Critical Thinking, Reading, and Writing—General Competency

939 Students who complete courses in the Writing Intensive Program will be able to:

- 940 • Understand a writing assignment as a series of tasks, involving finding, analyzing,
- 941 evaluating, and synthesizing appropriate primary and/or secondary sources.
- 942 • Assess the nature and scope of writing assignments to determine appropriate writing
- 943 and/or research strategies.
- 944 • Exhibit ability to access, evaluate, and utilize information from a variety of sources and
- 945 media.
- 946 • Constructively develop their own ideas in relation to those of others.
- 947 • Exhibit critical thinking by applying principles and strategies of analysis and
- 948 argumentation.

949

950 B2. Critical Thinking, Reading, and Writing---Disciplinary/Professional Competency

951 Students who complete courses in the Writing Intensive Program will be able to:

- 952 • Learn the interrelationships among critical thinking, critical reading, and writing in the
- 953 relevant discipline.
- 954 • Exhibit ability to synthesize research in writing appropriate to the discipline.

955

956 C1. Processes---General Competency

957 Students who complete courses in the Writing Intensive Program will be able to:

- 958 • Write multiple drafts to create and complete a successful text.
- 959 • Develop flexible strategies for generating, revising, critiquing, editing, and proof-
- 960 reading/copy-editing.
- 961 • Learn to critique their own and others' work

962

963 C2. Processes--- Disciplinary/Professional Competency

964 Students who complete courses in the Writing Intensive Program will be able to:

- 965 • Write multiple drafts to create and complete a successful text in the relevant discipline.
- 966 • Write in stages, review work-in-progress in collaborative peer groups, save editing for the
- 967 latter stage of the writing process, and apply technologies commonly used to research and
- 968 communicate in their fields.
- 969 • Reformulate and revise first drafts, attending first to concerns about argument and
- 970 accuracy and later to more local, paragraph, and sentence issues.
- 971 • Learn to critique their own and others' works according to the standards of the relevant
- 972 discipline.

973

974 D1. Knowledge of Conventions—General Competency

975 Students who complete courses in the Writing Intensive Program will be able to:

- 976 • Use appropriate syntax, grammar, punctuation, and spelling. Exhibit competency in
 977 usage and writing mechanics so that words accurately convey the writer's meaning
 978 • Appropriately document their work. Students will demonstrate the ability to incorporate
 979 research appropriately and to cite sources accurately.
 980 • Develop knowledge of genre conventions ranging from structure and paragraphing to
 981 tone and mechanics. Students will demonstrate the ability to organize papers with an
 982 identifiable structure.
 983

984 D2. Knowledge of Conventions--- Disciplinary/Professional Competency

985 Students who complete courses in the Writing Intensive Program will be able to:

- 986 • Appropriately use specialized vocabulary, format, and documentation in the relevant
 987 discipline. Use syntax, terminology, and technical language appropriate to the selected
 988 discipline's overall style.
 989 • Write in the forms and genres of writing required by each discipline (i.e., conference
 990 papers and research articles).
 991

992 E. Other—Disciplinary/Professional Competency

993 Students who complete courses in the Writing Intensive Program will be able to:

- 994 • Exhibit confidence in the emerging writing skills and cognitive abilities needed to
 995 communicate in the disciplines.
 996 • Exhibit less apprehension about scholarly writing
 997 • Demonstrate writing skills sufficient to fulfill the writing requirements of each academic
 998 program (i.e., a graduate level thesis).
 999