SY204 Course Policy

References

a. ACDEANINST 1531.58, Administration of Academic Programs

b. ACDEANINST 1531.64, Academic Accountability

c. CYBSCIINST 3120.32, Cyber Science Department Standard Organization and Regulations Manual

d. ACDEANNOTE 1531.2, Academic Scheduling and Start of Semester Items

Enclosures

1. SY204 Collaboration Policy
2. SY204 Course Syllabus

Purpose

Per references (a–d), the following comprises the course policies for SY204 - Systems Programming & Operating System Fundamentals, AY2020 Spring term.

WARNING: *As a student in this class, you will learn concepts and gain experience with tools that could be used unethically. DO NOT use knowledge or experience gained for unethical purposes. You MAY NOT use tools or techniques learned in this class to violate USNA policy, or any other government restrictions on information system use. You should never employ offensive cyber operations on any information system without the express written consent of the information system owner or legal authority.*

Note: Any of the topics, tactics, or techniques discussed in this, previous, or current Cyber Operations (SY) courses may be used for research purposes.

General Information

Course:	SY204 - Systems Programming & Operating System Fundamentals
Credits:	3 (recitation) - 2 (lab) - 4 (credits)
Term:	AY2020 Spring
Prerequisites:	SY201, IC210, or SI204
Co-requisites:	(none)

Sections:	1121, 2141	3321, 5521	4341	6541
Instructor:	Mr. De Bels	Asst Prof Casey	LCDR Hoffmeister	Asst Prof Brown
Username:	`debels`	`wcasey`	`hoffmeis`	`dabrown`
Office:	Leahy 303C (LE303C)	Leahy 102 (LE102)	Leahy 100 (LE100)	Leahy 103 (LE103)

Contact instructor for office hours.

Course Description

Students will expand their programming expertise through the exploration of systems level programming utilizing C. Additionally, students will learn fundamental features and designs of operating systems. The activities in the course will be covered from a cyber operations perspective.

Course Learning Outcomes

Through this course and your collective efforts you will be able to:

- Describe computing environment foundation concepts with respect to security from the perspective of an operating system
- Design, develop, debug, and document systems level programs in C using structured programming techniques
- Develop programs to execute in a UNIX environment
- Develop programs that utilize inter process communications
- Design, develop, debug, and document a comprehensive program in a small team
- Apply principles of secure cyber design to programs used for cyber operations; i.e. design and develop with the adversary in mind

Course Resources

You. You will achieve the course objectives through sustained, active participation in the course activities, course discussions, and course assignments. This is a hands-on course that requires your active participation in the learning process. Your individual and group success in this course is highly dependent on your active participation in the course activities.

Textbooks. There are two required textbooks for SY204; you may use either a print (hardcover or paperback) or electronic version of the textbooks.

- Kerrisk, Michael. *The Linux Programming Interface: A Linux and UNIX System Programming Handbook*. No Starch Press, 2010. [Required]
- Prinz, Peter and Ulla Kirch-Prinz. *C Pocket Reference*. O'Reilly, 2002. [Required]

Course Website. The course website will be the primary way you will access course material. The course website is on the Naval Academy intranet at: `https://courses.cyber.usna.edu/SY204/`.

Extra Instruction. If you are struggling with course material or want to dig deeper into the course material, seek extra instruction. See your instructor for office hours.

MGSP. There will be MGSP sessions for SY204, see the course website or the Center for Academic Excellence for the schedule.

Grading

Every effort will be made to ensure prompt and sufficient feedback on graded material. Feedback and grades will be clearly identified on returned work.

Assignments. In class and outside of class there will be times that you will be authorized to work (collaborate) in groups and other times that you will not be authorized to work in groups; studying and discussing course material in groups is recommended.

Homework/In-Class Assignments. In general you will be allowed to discuss topics and concepts on assignments with others (see *Honor Policy* below). Use discussions to further your understanding of the material. Homework and in-class assignments in this course will primarily be used as a part of your learning process, there will be an assessment component of homework and in-class assignments. Homework and in-class assignments will be made available through the course website and are due at the beginning of the class period after being assigned, unless otherwise stated. Assignments shall not be worked on during the ten minutes prior to the start of class meeting they are due.

Programming Assignments. In general you will be allowed to discuss topics and concepts on programming assignments with other students in the course (see *Honor Policy* below). Use discussions to further your understanding of the material. Programming assignments will be used as part of your learning process, and as a means to assess your learning. Programming assignments will be made available through the course website. You can expect that programming assignments will take effort outside of the designated laboratory times to complete. There will be two type of programming assignments: laboratory, and project.

Laboratory. Programming lab assignments are smaller in scope and will generally be due a week after assigned, unless otherwise stated. There will be multiple programming lab assignments. Lab assignments will have a specific due date and time, the timestamp on the submit server (`submit.cs.usna.edu`) will be used to check submission date and time. A late penalty of 3^N, where N is the number of days late, will be assessed on programming assignments submitted after the due date and time.

Project. There will be a single course-long programming project; the project is larger in scope and will generally incorporate and tie concepts from multiple lab assignments together. You will be given some time in class to work on the project, but will need to work outside of class to complete the project. The project will be a small group (2–3 students) project.

Quizzes. There will be weekly to biweekly quizzes covering concepts from reading assignments, course discussions, or assignments. Quizzes will be given at the beginning of lab periods, and will take approximately ten minutes. Quiz questions will range from short answer to small programming tasks.

Exams. You will demonstrate your knowledge and understanding of the material through exams. All exams will be individual effort. The 12-Week exam will focus on material since the 6-Week exam, but will require an understanding of material covered on the 6-Week exam; the final exam will be cumulative.

Instructor Option. Your instructor will determine what work will be required of you to earn credit for the Instructor Option portion of your grade. Examples include, but are not limited to: muddy point activities, presentations, programming assignments, written assignments, class participation, or increased grade weightings.

Weighting.

Category/Grading Period	6-Week	12-Week	End of Course
6-Week Exam	40%	10%	10%
12-Week Exam	-	30%	10%
Final Exam	-	-	20%
Quizzes	10%	10%	10%
Homework / In-Class	10%	10%	10%
Programming - Laboratory	35%	35%	20%
Programming - Project	-	-	15%
Instructor Option	5%	5%	5%

Note: Quizzes, homework, and lab grades will be cumulative; for example, the 12-Week grading period homework grade will include homework assignments from the beginning of the course through the 12-Week grading period.

Late Policy. Late work will not be accepted for credit, but will be reviewed and returned with feedback provided, with the exception of lab assignments discussed above.

Absences. As a leader you are expected to look ahead, identify issues, and propose solutions. It is your responsibility to discuss your plans to make up course material with your instructor at least one week prior to a planned absence (MO, medical/dental appointment, etc.). If you know you are going to miss turning in an assignment on time due to an MO, but not miss the class days associated with the assignment, then you shall turn in the assignment to your instructor early. If you know you are going to miss a class day associated with an assignment, then discuss your planned absence with your instructor prior to missing class. If an unplanned absence occurs at the last minute you shall contact your instructor (likely via email) to arrange plans to make up course material as soon as possible. Failing to discuss plans to make-up material prior to a planned absence or by the day you return from

an unplanned absence will result in the missed assignments being treated as late. Effort will be made to make the requisite course material available to you before a planned absence to allow you to complete assignments prior to your departure to support you not falling behind academically.

Note: Academic buildings are accessible on the weekends.

Honor Policy

Enclosure (1) contains the definition of the different collaboration policies that will be used to specify what actions are authorized and unauthorized. Unless stated otherwise on a specific assignment the following collaboration policies shall apply to the assignments of that type. **You are charged with understanding and executing the honor policy, and seeking clarification at any time if there is a potential misconception — *if in doubt, seek clarification from your instructor***.

Assignment Type	Default Collaboration Permissions
Exams	CP-000$_i$
Quizzes	CP-000$_i$
Homework / In-Class	CP-010$_i$
Programming - Laboratory	CP-010$_i$*
Programming - Project	CP-710$_g$
Instructor Option	(set by instructor on assignment)

Note: Copying will never be considered as collaboration; copying will always be considered a violation of the honor policy.
*: Specific to programming lab assignments, students *shall NOT* look at each other's source code (no shoulder surfing).

Authorized Resources. See the course website *Resources* webpage for the list of resources that are authorized for referencing during course activities per the associated collaboration policy.

Unauthorized Resources. See the course website *Resources* webpage for the list of resources that are unauthorized for referencing during course activities per the associated collaboration policy. Use of unauthorized resources will be considered a violation of the course honor policy.

If a resource is *not* in the list of authorized resources, then you shall consider the resource unauthorized.

Other

Laboratory Decorum. The course will typically be held in a computer laboratory utilizing government equipment. Beverages are permitted in classrooms and laboratories provided they are in closed containers. No food or smokeless tobacco products are permitted in classrooms or laboratories. You shall attend to personal matters before the start of class.

Section Leader. The Section Leader will:

- Call the class to attention at the beginning and end of each class session, and verbally report assembly results (per reference (b))
- Report to the Math and Science Division front office (MI380) in the event the instructor is not present within five minutes of the start of a class session (per reference (b))
- Assist the instructor as directed by the instructor
- As as section liaison to the instructor

Assistant Section Leader. The Assistant Section Leader will:

- Assist the section leader as directed by the section leader
- Act as section leader in the absence of the section leader (per reference (b))

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