Course Change Request

New Course Proposal

Date Submitted: 04/15/21 2:59 pm

Viewing: COS 100 : Introduction to Science as Profession

Last edit: 04/15/21 4:31 pm

Changes proposed by: gcraft

In Workflow

1. SC Curriculum Committee
2. SC Associate Dean
3. Assoc Provost-Undergraduate
4. Registrar-Courses
5. Banner

Are you completing this form on someone else's behalf?

No

Effective Term:	Fall 2021		
Subject Code:	COS - College of Science	**Course Number:**	100
Bundled Courses:			
Is this course replacing another course?	No		
Equivalent Courses:			
Catalog Title:	Introduction to Science as Profession		
Banner Title:	Intro to Science Professions		
Will section titles vary by semester?	No		
Credits:	1-2		
Schedule Type:	Lecture		
Hours of Lecture or Seminar per week:	2		
Repeatable:	May be only taken once for credit, limited to 3 attempts (N3)	**Max Allowable Credits:**	6
Default Grade Mode:	Undergraduate Regular		
Recommended Prerequisite(s):			

Recommended Corequisite(s):

Required Prerequisite(s) / Corequisite(s) (Updates only):

Registrar's Office Use Only - Required Prerequisite(s)/Corequisite(s):

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?

Registration Restrictions (Updates only):

Registrar's Office Use Only - Registration Restrictions:

Field(s) of Study:

Class(es):

Level(s):

Degree(s):

School(s):

Catalog Description:

This elective science course is intended for College of Science (COS) students participating in the College of Science Scientific Inquiry and Global Problem-Solving Learning Community. COS 100 is designed to orient COS Learning Community students to today's Science disciplines, and build interdisciplinary competencies across today's scientific career pathways. Topics covered include career readiness and professionalism in science, exploration of 21st century career skills, academic and career pathways in science, global problem-solving, and an introduction to fundamental principles in research, writing and communication that span scientific research and practice.

Justification:

Effective Fall 2021, all residential freshmen will be required to participate in a Mason Learning Community, with approximately 170 freshmen projected to join the College of Science Learning Community. All learning communities must identify a common course requirement for their participants. There is no existing course option in the College of Science that is applicable across undergraduate degree programs to use as a common course. Although regularly offered at other institutions, the College of Science currently has no introductory course option that engages students in the exploration of academic and career pathways in the

sciences, or in the development of fundamental skills in scientific research, writing, and communication that are directly correlated with student success in scientific disciplines. To address this need, COS 100: Introduction to Science as a Profession, has been developed to serve as the College of Science Learning Community common course requirement.

Does this course cover material which crosses into another department? No

Learning Outcomes:

Upon completion of the course, students will enhance their knowledge of science professions and competencies by:
1. Investigating academic and career pathways in science through exploration and in-depth research of academic success and career competency models and engagement with faculty and industry representatives, leading to the development of career planning products that support success in 21st Century science professions.
2. Understanding historical scientific knowledge creation and dissemination, including an overview of equity, colonialism and bias in science professions.
3. Exploring emerging models of scientific inquiry and global and intercultural problem-solving, including ethical engagement in research and practice within their selected scientific career pathway.
4. Communicating scientific content effectively across written, verbal, and digital platforms, within and across academic and professional environments.
5. Creating and critiquing scientific products (written, verbal, and digital) through individual and group analysis and application of concepts, practices, and results.
6. Effectively utilizing basic inquiry and evaluation measures (scientometrics, etc.) in interdisciplinary scientific research.

Attach Syllabus
Syllabus Wiley Version Fall 2021 COS 100 LC Course.pdf

Additional Attachments

Staffing:
Kerin Hilker-Balkissoon and Padmanabhan Seshaiyer

Relationship to Existing Programs:
none

Relationship to Existing Courses:
none

Additional Comments:

Reviewer Comments

Key: 17192

Syllabus	
Course Information	**College of Science (COS) 100: Introduction to Science as a Profession (1-2 credits)** Location: Hybrid (51-75% Face-to-Face)
Instructors	Kerin Hilker-Balkissoon and Padmanabhan Seshaiyer (More information at https://mymasonportal.gmu.edu/) Office Hours by appointment.
Course Description	This elective science course is intended for College of Science (COS) students participating in the College of Science Scientific Inquiry and Global Problem-Solving Learning Community. COS 100 is designed to orient COS Learning Community students to today's Science disciplines, and build interdisciplinary competencies across today's scientific career pathways. Topics covered include career readiness and professionalism in science, exploration of 21st century career skills, academic and career pathways in science, global problem-solving, and an introduction to fundamental principles in research, writing and communication that span scientific research and practice. Students will apply their knowledge through individual and group projects and engage with College of Science faculty and industry leaders across disciplines to meaningfully explore Science programs and professions of interest, while developing and refining their academic and career goals. Students' course products are curated into a summative ePortfolio, which documents the cohesive analysis of the student's career research in a creative, multimedia format.
Course Objectives	Upon completion of the course, students will enhance their knowledge of science professions and competencies by: 1. Investigating academic and career pathways in science through exploration and in-depth research of academic success and career competency models and engagement with faculty and industry representatives, leading to the development of career planning products that support success in 21st Century science professions. 2. Understanding historical scientific knowledge creation and dissemination, including an overview of equity, colonialism and bias in science professions. 3. Exploring emerging models of scientific inquiry and global and intercultural problem-solving, including ethical engagement in research and practice within their selected scientific career pathway. 4. Communicating scientific content effectively across written, verbal, and digital platforms, within and across academic and professional environments. 5. Creating and critiquing scientific products (written, verbal, and digital) through individual and group analysis and application of concepts, practices, and results. 6. Effectively utilizing basic inquiry and evaluation measures (scientometrics, etc.) in interdisciplinary scientific research.

Course Methodology	The class format will combine reading, lectures, presentations, and other learning tools. The class will be interactive and require every student to be engaged in the classroom discussion and assignments. In addition to the lectures, screencasts and timely completion of assignments, every student will be expected to be an active participant and a dedicated individual applying what you learn to every element of the course work.
Required textbook(s) and/or materials	**There is no required textbook for this class. All required course readings and materials are free and openly available via the internet or through Mason Library Services.**
Computer Requirements	**Hardware:** You will need access to a Windows or Macintosh computer with at least 2 GB of RAM and access to a fast and reliable broadband internet connection (e.g., cable, DSL). A larger screen is recommended for better visibility of course material. You will need speakers or headphones to hear recorded content and a headset with a microphone is recommended for the best experience. For the amount of Hard Disk Space required taking a distance education course, consider and allow for: 1. the storage amount needed to install any additional software and 2. space to store work that you will do for the course. If you consider the purchase of a new computer, please go to Patriot Tech to see recommendations. **Software:** Free Audacity software is required for this course. This course uses Blackboard as the learning management system. You will need a browser and operating system that are listed compatible or certified with the Blackboard version available on the myMason Portal. Seesupported browsers and operating systems. Log in to myMason to access your registered courses. Some courses may use other learning management systems. Check the syllabus or contact the instructor for details. Online courses typically use Acrobat Reader, Flash, Java, andWindows Media Player, QuickTime and/or Real Media Player. Your computer should be capable of running current versions of those applications. Also, make sure your computer is protected from viruses by downloading the latest version of Symantec Endpoint Protection/Anti-Virus software for free here. Students owning Macs or Linux should be aware that some courses may use software that only runs on Windows. You can set up a Mac computer with Boot Camp or virtualization software so Windows will also run on it. Watch this video about using Windows on a Mac. Computers running Linux can also be configured with virtualization software or configured to dual boot with Windows. Note: If you are using an employer-provided computer or corporate office for class attendance, please verify with your system administrators that you will be able to install the necessary applications and that system or corporate firewalls do not block access to any sites or media types.
Course Website	Blackboard will be used for this course. You can access the site at http://mymasonportal.gmu.edu. Login and click on the "Courses" tab. You will see our COS 100 course NOTE: Username and passwords are the same as your Mason email account. You must have consistent access to an internet connection in order to complete the assignments in this course through Blackboard (http://mymason.gmu.edu). Note the technology requirements for the College of Science in your Blackboard course menu—it contains details of minimum technology requirements.

Participation	Learning can only happen when you are playing an active role. It is important to place more emphasis on developing your insights and skills, rather than transmitting information. Knowledge is more important than facts and definitions. It is a way of looking at the world, an ability to interpret and organize future information. An active learning approach will more likely result in long-term retention and better understanding because you make the content of what you are learning concrete and real in your mind. Additional information related to participation is included below, under the Course Evaluation and Grading section.
Rules and Expectations	In correspondence/communication students will be expected to: a. Be professional and respectful b. Make reasonable requests of the instructor. We will be happy to clarify course material and answer legitimate questions; however, please check information sources (e.g., syllabus, Blackboard) where information is posted, and remember, "Poor planning on your part does not constitute an emergency on my part" In regard to honesty in work students will be expected to: a. Review the University integrity and honesty policies in the student handbook for guidelines regarding plagiarism and cheating (summarized below). I will gladly clarify my stance on any questionable or "grey area" issues you may have. b. Refrain from dishonest work as it will receive a minimum penalty of zero on the assignment and a maximum penalty of a zero for the course with a report to the Honor committee. The GMU Honor Code requires that faculty submit any suspected Honor Code violations to the Honor Committee. Therefore, any suspected offense will be submitted for adjudication.
Mason Honor Code	**The complete Honor Code is as follows:** To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code: **Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.** (From the Catalog – catalog.gmu.edu)
Cheating Policy	Any form of cheating on an activity, project, or exam will result in zero points earned. "Cheating" includes, but is not limited to, the following: reviewing others' exam papers, having ANY resources utilized when not allowed, collaborating with another student during an individual assignment. If you have questions about when the contributions of others to your work must be acknowledged and appropriate ways to cite those contributions, please talk with the professor or utilize the GMU writing center.
Plagiarism and the Internet	Copyright rules also apply to users of the Internet who cite from Internet sources. Information and graphics accessed electronically must also be cited, giving credit to the sources. This material includes but is not limited to e-mail (don't cite or forward someone else's e-mail without permission), newsgroup material, information from Web sites, including graphics. Even if you give credit, you must get permission from the original source to put any graphic that you did not

<table>
<tr><td></td><td>create on your web page. Shareware graphics are not free. Freeware clipart is available for you to freely use. If the material does not say "free," assume it is not.

Putting someone else's Internet material on your web page is stealing intellectual property. Making links to a site is, at this time, okay, but getting permission is strongly advised, since many Web sites have their own requirements for linking to their material. Review the Honor Code here.</td></tr>
<tr><td>Individuals with Disabilities</td><td>Students with documented disabilities should contact the Office of Disability Services (703) 993-2474) to learn more about accommodations that may be available to them. (From the Catalog – catalog.gmu.edu)</td></tr>
<tr><td>Academic Integrity and Inclusivity</td><td>This course embodies the perspective that we all have differing perspectives and ideas, and we each deserve the opportunity to share our thoughts. Therefore, we will conduct our discussions with respect for those differences. That means, we each have the freedom to express our ideas, but we should also do so keeping in mind that our colleagues deserve to hear differing thoughts in a respectful manner, i.e. we may disagree without being disagreeable. http://oai.gmu.edu/</td></tr>
<tr><td>Student Privacy Policy</td><td>George Mason University strives to fully comply with FERPA by protecting the privacy of student records and judiciously evaluating requests for release of information from those records. Please see George Mason University’s student privacy policy

https://registrar.gmu.edu/students/privacy/</td></tr>
<tr><td>E-Mail Policy</td><td>Mason uses electronic mail to provide official information to students. Examples include notices from the library, notices about academic standing, financial aid information, class materials, assignments, questions, and instructor feedback. Web: masonlive.gmu.edu

Students are responsible for the content of university communication sent to their Mason e-mail account and are required to activate that account and check it regularly.

Students are also expected to maintain an active and accurate mailing address in order to receive communications sent through the United States Postal Service. (From the 2017-18 Catalog – catalog.gmu.edu)</td></tr>
<tr><td>Course Grading & Evaluation</td><td>Grading of all writing assignments, including journals and discussion boards, is based on students’ incorporation of the material covered in class. Revisions to drafts are also graded based on students’ efforts in editing and improving original drafts. Assignments and discussions will generally be submitted through Blackboard, unless otherwise noted by the course instructors. There is one midterm project and one final projects that comprise 50% of the total grade for the course.

<table>
<tr><td>Class Participation</td><td>10%</td></tr>
<tr><td>Take-Home Assignments</td><td>30%</td></tr>
<tr><td>Discussion Boards</td><td>10%</td></tr>
<tr><td>Summative Assignments (see below)</td><td>50%</td></tr>
<tr><td>Total</td><td>100%</td></tr>
<tr><td></td><td></td></tr>
</table>
It is important to budget enough study time into your schedule. College students are generally expected to work independently for an additional 2-3 hours outside of class for every credit</td></tr>
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<tr><td></td><td>hour/hour in the standard (non-lab) classroom. For this course, you should budget a total of 3-4 hours per week as a one credit student, and 4-6 hours per week as a two credit student. Unless otherwise stated, all assignments are due by the end of the week in which they are assigned. There is a one day overlap between the end of one course week and the beginning of the next. For the purposes of this course, a week is defined as beginning at 12:01 am each Monday EST, and ending at 11:59 pm on the following Monday EST.

To help you manage your schedule and time to complete the assignments in this course, please follow the recommended timeline below. If you have a question or concern or encounter a problem about an assignment, please contact me immediately so we can discuss and work out a resolution.

<table>
<tr><td colspan="2">Grades will be assigned as follows:</td></tr>
<tr><td>A</td><td>93.00-100%</td></tr>
<tr><td>A-</td><td>89.50-92.99%</td></tr>
<tr><td>B+</td><td>87.00-89.49%</td></tr>
<tr><td>B</td><td>83.00-86.99%</td></tr>
<tr><td>B-</td><td>80.00-82.99%</td></tr>
<tr><td>C+</td><td>77.00-79.99%</td></tr>
<tr><td>C</td><td>73.00-76.99%</td></tr>
<tr><td>C-</td><td>70.00-72.99%</td></tr>
<tr><td>D</td><td>60.00-69.99%</td></tr>
<tr><td>F</td><td>0-59.99%</td></tr>
</table>
</td></tr>
<tr><td>Discussion Boards: 10%</td><td>Your challenge is to immerse yourself in the topics and perspectives presented in the course. You will want to be able to comment on the discussion topics with authority. You are encouraged to make notes on your own thoughts about the various concepts and issues, and consider possible issues/outcomes. Your posts should be to the point and include sufficient technical detail for others to respond. You should present your opinions, but justify them with facts and proper sources. What did you disagree with and why, or not understand?

Initial/Original Post: Please post what you view as the appropriate responses to the above prompts. Your initial post should be 150-300 words. Please provide response with a clear, well-formulated thesis; sentence structure, grammar, punctuation, and spelling count. Support all posts with appropriate rationale and citations from readings; appropriately document sources, if appropriate.

Responding to Others: Responses to at least one classmate’s postings should be approximately 100-150 words and should be thoughtful, substantial, polite and more extensive than a simple "well done" phrase or "I agree." Consider points of agreement, disagreement, assumptions, and value judgments. You will be able to respond to others after you submit your initial post.

Instructions: Each student will make at least one original post by Thursday, 11:59 PM, EST, and react to at least one of your peers' posts by Monday, 11:59 PM, EST. Review the Discussion Board Participation guidelines (including rubric).</td></tr>
<tr><td>Assignments: 30%</td><td>Each week assignments (activities and/or journals) are required to be uploaded to Blackboard. Assignments are due by Monday, 11:59 PM, ET unless otherwise stated. Refer to the course schedule and weekly overviews for details.</td></tr>
<tr><td>Individual and Group</td><td>• Students are considered to participate fully in class when they:
• Prepare for and actively engage in online discussions</td></tr>
</table>

Participation: 10%	• Thoughtfully engage in peer evaluation and collaboration activities • Raise informed discussion points and asking questions, and listening to other perspectives
Summative Projects: 50%	• Academic or Industry Informational Interview Write-Up • In Class Presentation on selected Academic and Career Pathway • Summative ePortfolio including your About Me, Photo, Resume, Science Career Infographic, SMART Career Goal Statements, and two examples of your work. • For two credit course option only: Research Paper on Origins and Development of Selected Science Career Pathway.

Need Help with this course, or anything else? If you encounter any difficulties in this course, or with your ability to access Mason classes due to academic, personal, or work issues, please let me know. You may utilize the Ask Your Instructor discussion forum, or email your instructor **immediately!** Do not wait until the end of the semester to ask for help in understanding the material in order to improve your grade - by then, it may be too late. Do not be afraid to ask for help! In addition to your instructor, the Counseling Center is committed to improving academic and personal skills, and offers many workshops and counseling groups throughout the semester. Make use of the many rich academic and personal opportunities available at Mason!

COS 100 Course Schedule: Fall 2021		
Date	**Topic**	**Assignments (due at 11:59 pm at the Monday end of the course week)**
Week 1:	**Lesson 1: Intro to Science Careers and ePortfolios**	• ePortfolio - About Me Intro • Introductory Journal: My Science Career Plan
Week 2:	**Lesson 2: Fundamentals of Science Writing**	• Science Program Exploration Lesson • Small Group: APA Citation Challenge • Peer Evaluation Pitfalls Discussion Board
Week 3:	**Lesson 3: Evaluating Scholarly Research**	• Science Program Exploration Lesson • Small Group: Science Article Critique - IMRAD Rubric • Virtual Crossmark Scavenger Hunt
Week 4:	**Lesson 4: Co-curricular Professional Development in Science**	• Science Program Exploration Lesson • Experiential Learning Discussion Board • Small Group: Investigating Badges, Microcredentials, and More • Post StrengthsFinder Assessment Results Journal
Week 5:	**Lesson 5: Leveraging Your Strengths for Wellness and Success**	• Science Program Exploration Lesson • Develop e-Portfolio Shell • Small Group: Complete Strengths Quadrant Activity • My Signature Strengths Discussion Board
Week 6:	**Lesson 6: Exploring Interdisciplinary Skills for Science Careers**	• Science Program Exploration Lesson • Complete Academic or Industry Informational Interview Plan • Small Group: Science Career Skills Mastermind • Global & Intercultural Fluency Journal
Week 7:	**Lesson 7: Workshop Week – No Class**	• 1:1 Instructor Review Session • Identify Academic or Industry Informational Interviewee • Science Midterm Career Self-Evaluation Journal • Draft Academic & Career SMART Goals
Week 8:	**Lesson 8: Effective Science Communication**	• Science Program Exploration Lesson • Finalize Academic or Industry Informational Interview Questions • Presenter Self-Evaluation Journal • Science Communication Discussion Board • Small Group: Science Communication Product Review

Week 9:	**Lesson 9: Deconstructing Academic Pathways in Science**	• Science Program Exploration Lesson • My Academic Roadmap Journal • Small Group: Translating Academic Jargon • Science Career Infographic Pre-Writing Plan
Week 10:	**Lesson 10: Exploring Science Careers of Tomorrow**	• Science Program Exploration Lesson • Academic or Industry Informational Interview Transcription • Small Group: Researching Occupational Outlook • BLS OCO Career Research Journal • Futurism and Science Careers Discussion Board
Week 11:	**Lesson 11: Demystifying Experiential Learning Opportunities in Science**	• Science Program Exploration Lesson • Research/Internship Resume & Cover Letter • Small Group Activity: Group Resume • Science Career Research Infographic Draft
Week 12:	**Lesson 12: Equity, Ethics, and Bias in Science Research and Practice**	• Science Program Exploration Lesson • Personal Ethics Statement Assignment • Small Group: Equity Blocks • Colonialism and Bias in Science Journal • Career Research Paper Draft (Two Credit Enrollees Only)
Week 13:	**Lesson 13: Science Career Management**	• Science Program Exploration Lesson • Science Career Research Presentation Plan • Small Group: Marshmallow Challenge • Review/Update Science Academic and Career SMART Goals • Science Career Self-Evaluation & Growth Journal
Week 14:	**Lesson 14: Career Pathways Presentations**	• Academic and Career Pathways Presentations • Final Infographic (shared in presentations) • Revise and complete ePortfolio artifacts
Week 15+:	**Lesson 15: Evaluating Final Products**	• Final ePortfolio • Submit ePortfolio link to Faculty or Industry Interviewee • Submit Career Research Paper (Two Credit Enrollees Only)