

**SYLLABUS**  
**Special Topics/Scientific Writing (ANAT 6223)**

**DESCRIPTION:**

ANAT 6223 is a graduate course designed to expose students to cutting edge research in the biomedical sciences and improve scientific and technical writing skills. Students are expected to write either:

**Option 1:** Eight (8) essays on the content of scientific seminars held at GW and/or virtually per semester (approximately 250 words each) describing the health-related issue, the main questions addressed by the speaker, the key conceptual advances and how the research may lead to better treatments or therapeutic modalities.

**Option 2\*:** Four (4) essays on the following topics (approximately 250 words each):

- 1) Autobiography;
- 2) Motivation for becoming a doctor;
- 3) Relevant work, research, volunteer and leadership experience;
- 4) Interest in attending a particular medical school;

Followed by first and second drafts of a medical school personal statement (5,300 character limit including spaces).

\*Can only choose Option 2 if an AMCAS application has not been submitted.

**LEARNING OBJECTIVES:**

- 1) Describe scientific concepts in biomedical research and their applicability to medicine.
- 2) Apply writing best practices to produce a medical school personal statement.

**CREDIT HOURS: 2**

**PREREQUISITE:** Introductory Biology for Science or non-Science Majors. Enrollment in the Graduate Certificate in Anatomical and Translational Sciences (GCATS), the Master of Science in Anatomical and Translational Sciences (MATS) or permission of the Director of the GCATS-MATS Program.

**LECTURE CONTACT TIME/HOURS:** Independent study

**METHOD OF ASSESSMENT:** Eight (8) seminar reports worth 12.5% of the final grade or four (4) essays worth 12.5% of the final grade plus first and second drafts of a personal statement each worth 25% of the final grade. Each essay will be graded on a scale of 0-100.

**GRADING SCALE:**

A (4.0) = 90 – 100	C+ (2.3) = 78 – 78.9
A- (3.7) = 89.0 – 89.9	C (2.0) = 75 – 77.9
B+ (3.3) = 87.0 – 88.9	C- (1.7) = 72 – 74.9
B (3.0) = 80.0 – 86.9	F (0) = < 71.9
B- (2.7) = 79.0 – 79.9	Grades of D+, D, and D- are not used for graduate students at GW

## FACULTY:

- 1) **Robert Hawley, Ph.D.**, Course Director  
Professor of Anatomy and Cell Biology  
Email: [rghawley@gwu.edu](mailto:rghawley@gwu.edu)
- 2) **Kurt Johnson, Ph.D.**,  
Professor of Anatomy and Cell Biology  
Email: [kurtj@gwu.edu](mailto:kurtj@gwu.edu)

## TEXTBOOK:

*The Elements of Style* by William Strunk, August 19, 2011 [EBook #37134].

*There is no need to purchase the textbook.* It can be found at the following link:

<https://www.gutenberg.org/files/37134/37134-h/37134-h.htm>

## RESOURCES:

**Resources for Writers (GW Writing Center):** <https://writingcenter.gwu.edu/resources-writers>

**Writing in the Sciences (Coursera/Stanford; free to audit):** <https://www.coursera.org/learn/sciwrite>

## CLASS POLICIES

Late work: Accepted with permission, penalty may be incurred if unduly late as determined by instructor

Religious Holidays: Will be accommodated if requested

## ACADEMIC INTEGRITY

“Students are responsible for the honesty and integrity of their own academic work, ... Academic integrity violations are cheating of any kind, including misrepresenting one's own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information.” Please read the entire code: <https://studentconduct.gwu.edu/code-academic-integrity-0>

## SUPPORT FOR STUDENTS OUTSIDE THE CLASSROOM

### *DISABILITY SUPPORT SERVICES*

Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in Rome Hall, Suite 102, to establish eligibility and to coordinate reasonable accommodations. For additional information, please refer to:

<https://disabilitysupport.gwu.edu/>

### *COUNSELING SERVICES*

The University offers 24/7 counseling assistance by calling 201-994-5300. For additional information, please refer to: <https://healthcenter.gwu.edu/counseling-and-psychological-services>

## SAFETY AND SECURITY

For help in an emergency, call 911 or GW Police (202-994-6111).

For additional information on this important topic, please see: <https://safety.gwu.edu/>

## IMPORTANT DATES

September 24, 2023: Last day to drop a course on GWeb

November 5, 2023: Last day to withdraw from a course with a grade of ‘W’ on GWeb

## ESSAY DUE DATES (ANAT 6223)

Date	Essay Due
Tuesday, September 5	Option 1: Seminar 1 Option 2: Autobiography
Monday, September 18	Option 1: Seminar 2 Option 2: Motivation for becoming a doctor
Monday, October 2	Option 1: Seminar 3 Option 2: Relevant work, research, volunteer and leadership experience
Monday, October 16	Option 1: Seminar 4 Option 2: Interest in attending a particular medical school
Monday, October 30	Option 1: Seminar 5
Monday, November 13	Option 1: Seminar 6 Option 2: Personal Statement (First Draft)
Monday, November 27	Option 1: Seminar 7
Monday, December 11	Option 1: Seminar 8 Option 2: Personal Statement (Second Draft)

### SELECTED SEMINAR LISTINGS (others to be announced):

In addition to the seminars available at GW, students may also write essays on the content of open-access online seminars presented throughout the semester at NIH and other research institutes. Note that many seminars are recorded so that it is not necessary to attend the live presentation. Some possibilities are listed below.

Wednesday Afternoon Lecture Series: <https://oir.nih.gov/wals>

Wednesday Afternoon Lecture Series (past seminars): <https://videocast.nih.gov/PastEvents?c=3>

Director's Series: <https://www.nih.gov/about-nih/who-we-are/nih-director/directors-seminar-series>

Director's Seminar Series (past seminars): <https://www.videocast.nih.gov/PastEvents?c=25>

Borne of Oxford Seminars:

World Wide Genetics: <https://www.world-wide.org/Genetics/>

World Wide Medicine: <https://www.world-wide.org/Med/>

World Wide Neuro: <https://www.world-wide.org/Neuro/>

## STANFORD WRITING IN THE SCIENCES (<https://www.coursera.org/learn/sciwrite>)

Instructor: Dr. Kristin Sainani, Professor (Teaching) of Epidemiology and Population Health

### Unit 1 (2 hours to complete)

Unit 1 introduces the course and reviews key principles of effective writing. In particular, you will practice cutting clutter from writing.

#### 7 videos (Total 79 min)

1.1: Introduction; principles of effective writing 11m

1.2: Examples of what not to do 6m

1.3: Overview, principles of effective writing 6m

1.4: Cut the clutter 17m

1.5: Cut the clutter, more tricks 4m

1.6: Practicing cutting clutter 9m

1 practice exercise

Unit 1 Homework (1h)

### Unit 2 (2 hours to complete)

Unit 2 focuses on writing with strong, active verbs. Lessons include how to: write in the active voice; avoid turning verbs into nouns; choose strong verbs; and get to the main verb of a sentence quickly.

#### 7 videos (Total 87 min)

2.1: Use the active voice 16m

2.2: Is it really OK to use "We" and "I" 5m

2.3: Active voice practice 5m

2.4: Write with verbs 8m

2.5: Practice examples 20m

2.6: A few grammar tips 10m

1 practice exercise (Raises issue of plagiarism)

Unit 2 Homework (1h)

### Unit 3 (4 hours to complete)

Unit 3 reviews how to vary sentence structure and write strong paragraphs. You will practice using the dash, colon, semi-colon, and parentheses, as well as writing well-organized and concise paragraphs.

#### 8 videos (Total 105 min)

3.1: Experiment with punctuation 28m

3.2: Practice, colon and dash 6m

3.3: Parallelism 5m

3.4: Paragraphs 9m

3.5: Paragraph Editing I 13m

3.6: Paragraph Editing II 11m

3.7: A few more tips 7m

1 practice exercise

Unit 3 Homework (1h)

### Unit 4 (4 hours to complete)

Unit 4 reviews the writing process. You will receive tips for making the writing process easier, more efficient, and more organized.

#### 7 videos (Total 81 min)

4.1 More paragraph practice 16m

4.2 Overview of the writing process 7m

4.3 The pre-writing step 11m

4.4 The writing step 7m

4.5: Revision 5m

4.6: Checklist for the final draft 12m

1 practice exercise

Unit 4 Homework (3h)

## Rubric for Scientific Writing<sup>1,2</sup>

Criteria	Needs Improvement	Adequate - Good	Excellent - Outstanding
<b>Grammar &amp; Spelling</b>	There are several grammatical and spelling errors.	There are minor or infrequent grammatical and spelling errors.	There are insignificant or no grammatical or spelling errors.
<b>Clear, Concise, &amp; Cohesive</b>	The writing sample lacks structure and purpose. Word usage is frequently confused or incorrect. Sentences often seem out of place or poorly connected.	The writing sample has an appropriate structure. The word usage is appropriate, although there may be occasional mistakes.	The writing sample is purposeful and well organized. The language and sentences are clear, and the word usage facilitates reader's understanding.
<b>Context</b>	The relevance of the research is not addressed.	The student provides some relevant context for the research question(s) being addressed.	The student appreciates the relevance of the research, the current gaps in our understanding being addressed, and explains how this research will help fill those gaps.
<b>Analytical Thinking</b>	The student demonstrates a limited understanding of the topic.	The student demonstrates a general understanding of the topic.	The student demonstrates a clear understanding of the topic and considers future directions that are insightful.

Adapted from:

1. Appendix B. Reflective Paper Rubric, ANAT 6192 Syllabus: Special Projects in Anatomical Sciences: Intro to Neuroradiology. Drs. Melissa Carroll and Marc Spencer, Course Co-Directors.
2. The Rubric for Scientific Writing. B.E. Timmerman, D.C. Strickland, R.L. Johnson and J.R. Payne. *Assessment & Evaluation in Higher Education*. 36:509-547, 2011.