RADT65

Pathology
Syllabus
&
Assignment
Schedule

RADT 65 PATHOLOGY SYLLABUS

DAY: Thursdays

TIMES AND LOCATIONS:

- Face-to-Face in classroom dates: 1/19/17, 2/23/17, 3/9/17, 3/16/17, 4/20/17, 5/4/17, 5/11/17, 5/18/17 and 5/25/17
- Online portion of class is on your own. Assignments are due every Thursday by 5:00 p.m.

INSTRUCTOR: BONNIE A. PATTERSON, BA, CRT, R.T.(R)(M)(CT)

PHONE # AND OFFICE HOUR: (707) 527-4945. I will be on campus on Tuesdays and some Thursdays, but I check for messages via *email* during the week, and will return your email within 48 hours. My office "hour" is on Tuesdays from 11:15 to 11:30 a.m. My office is Room 4074 on the third floor of the Race Health Sciences Building. The best way to communicate with me is by email: bpatterson@santarosa.edu.

COURSE GOALS: To familiarize students with all aspects of pathology required of Radiologic Technologists.

STUDENT LEARNING OUTCOMES: UPON COMPLETION OF THIS COURSE, YOU SHOULD BE ABLE TO:

- 1. Define basic terms related to pathological conditions and their relevance to radiologic procedures.
- 2. Discuss the classifications of trauma and prognosis for classifications of trauma.
- 3. List and describe the causes, processes of tissue disruption and repair, and the healing process.
- 4. List and define the systemic classifications of disease and prognosis.
- 5. Describe the radiographic appearance of selected diseases.
- 6. Identify radiologic procedures and interventional techniques appropriate for diseases common to each body system.

EXPECTATIONS:

- Study and complete the required assignments (online and in the textbook)
- Formulate your literary review topic
- Conduct a literature review
- Create the initial and final outlines in a Power Point presentation
- Answer questions through out the online readings
- Take quizzes
- Attend the mandatory in-class presentations
- Submit the final literary review project

FOR YOUR SUCCESS: you are expected to fully participate in this hybrid – online/face to face course and closely follow the scheduled study sequence, and exams, as well as complete all assignments and a literary review.

GETTING STARTED:

- Check-in online to Canvas.
- Introduce yourself in the "discussions" of Canvas
- Attend the mandatory class orientation.

HARDWARE AND SOFTWARE:

- 1. Make sure you have access to an Internet account with an Internet Service Provider via a modem or high-speed connections such as DSL; a recent version of a Web browser; email capability; and a sufficiently powerful PC or Macintosh computerto support these requirements.
- 2. I encourage your use of a thumbdrive for in-class presentations. If you do not have the required software, please ultilize the resources available to you at the HOPE Center, Doyle Library, and Disabilities Resources Department, or any laboratory of the District.

GRADING: RADT65: Grading is based on a percentage of points accrued through assignments, quizzes, a literary review paper and a final examination. All exams will be taken in the HLRC. If you have any questions regarding an exam taken, you will have one week after the exam has been given to discuss it in my office, to challenge your grade.

If a student earns a score of **less than 75% on any test, quiz, or midterm,** the student will be counseled which will result in being placed on remediation. A remediation plan will be initiated that will include identification of areas of weakness, goals for improvement and how those goals will be evaluated. The instructor provides students with a verbal warning or written feedback as to their status. The instructor counsels students regarding criteria for successful completion of the course and makes recommendations for improvement. Recommendations may include, but are not limited to remediation with faculty assistance, utilization of peer study groups, tutors, self-study instruction, and seeking assistance from counselors and instructors. Remediation plans will include a schedule for completion of recommendations. The student is expected to comply with the recommendations listed and be able to document that those recommendations have been completed on schedule. Remediation is considered a pro-active mechanism that identifies an area of deficiency, and suggests behavior that will mitigate that behavior.

GRADING RUBRIC:

<u>Literary Review Paper:</u> (500 pts or 20% of course grade)

- -Research and Citation
- -Content
- -Educational or technical value
- -Grammar
- -AMA style of writing

<u>Literary Review Presentation</u> (150 pts or 10% of course grade)

- -Preliminary Presentation (50 points)
- -Final Presentation (100 points)

Assignments (5% of course grade)

Four quizzes (30% of course grade)

Final Exam (35% of course grade)

Program Grading Scale:

95 - 100% = A

85 - 94% = B

75 - 84% = C

74% and below = Fail

ATTENDANCE:

All classes must be attended. This is considered the class participation portion of your grade. Lack of participation will reduce your grade by 15%.

REQUIRED TEXT:

1) Radiographic Pathology for Technologists. Nina Kowalczyk. 6th edition.

ASSIGNMENTS: Reading assignments are due the week they are assigned. There will be questions posted online each week that are to be answered no later than 5:00 p.m. on the Thursday the reading is assigned. **Late assignments are not accepted and will constitute a zero grade for that assignment.**

Your Literary Review Presentation and Paper

Presentation

- Prepare a working topic and bibliography for your topic. Include at least 5 cited sources. The bibliography must be typed in correct AMA style. Include at least 2 different types of sources (i.e. book, website, encyclopedia, or journal).

**No Wikipedia research please.

- These PowerPoint presentations must have the following: Title, introduction, bullets of topics (not paragraphs), any graphs, charts, or other pictures, conclusion, and a bibliography.

Final Paper

- The paper must cover an imaging modality and a pathologic condition, or a case study within the scope of medical imaging. The paper must have a title page and a synopsis page, and in addition be at least 7 pages in length, 12 font, double-spaced, with 1 inch margins on all sides.
- Page numbering, illustrations, references and tables must be in AMA style as outlined in this syllabus. The references must include at least two types of citations for reference (book, article,

journal, internet). There needs to be a total of 5 references or more.

- Citations must be in order of reference through out the paper, and in the bibliography page.
- Check you paper on a website www.turnitin.com to check for plagarism. Plagarism will result in an "F" grade for the final paper.
- Submit as a Microsoft Word document (.doc or .docx format)

LECTURE SCHEDULE AND ASSIGNMENTS SHEET

RADT 65 PATHOLOGY BONNIE A. PATTERSON, BA, R.T.(R)(M)(CT)

LESSON TOPIC/DATE	ASSIGNMENTS		
 Week 1 – 1/19 12:30 to 2:30 p.m. rm.4076 In Class - Course Overview and Discussion of Lecture and Expectations Phyllis Usina - SRJC Doyle Library orientation 	 Read <u>all</u> handouts given in class today regarding the course rules and expectations. 		
Week 2 − 1/26 • "Introduction to Pathology"	 Read Chapter 1 in textbook. Read Introduction to Pathology online Answer online reading questions and answer by Thursday by 5:00 p.m. 		
 Week 3 – 2/2 "Skeletal System I (A/P, congenital and hereditary, inflammatory, and neoplastic diseases" 	 Read Chapter 2 in textbook. Read Skeletal System I online. Answer online reading questions and answer by Thursday by 5:00 p.m. 		
Week 4 − 2/9 • "Skeletal System II (vertebral column, imaging considerations)"	 Read Skeletal System II online. Answer online reading questions and answer by Thursday by 5:00 p.m. 		
 Week 5 – 2/16 "Respiratory System I (A/P, congenital and hereditary, inflammatory, and neoplastic diseases" Quiz 1 (chapters 1, 2, and 3) next week 	 Read Chapter 3 from the textbook. Read Respiratory System I online. Answer online reading questions and answer by Thursday by 5:00 p.m. 		
 Week 6 – 2/23 "Respiratory System II (pathology, imaging considerations)" Quiz 1 in HLRC at 12:30 to 1:30 p.m. 	 Read Respiratory System II online. Answer online reading questions and answer by Thursday by 5:00 p.m. 		

 Week 7 – 3/2 "Cardiovascular System" Preliminary Power Point due next week in class. Week 8 – 3/9 "Abdomen and GI (Upper and Lower GI and neoplastic diseases)" Preliminary Power Points today. In class from 12:00 to 2:00 p.m. rm. 4076 Quiz 2 (chapters 4, 5, and 6) next week 	 Read Chapter 4 in textbook. Read Cardiovascular System online. Answer online reading questions and answer by Thursday by 5:00 p.m. Read Chapter 5 in textbook. Read Abdomen and G.I. online Answer online reading questions and answer by Thursday by 5:00 p.m. 		
 Week 9 – 3/16 6. "Abdomen and G.I. II (Hepatobiliary)" 7. Quiz 2 in HLRC at 1:00 to 2:00 p.m. 8. Next week is spring break (3/20 – 3/26) 	9. Read Chapter 6 of the textbook.10. Read Abdomen and G.I. II online11. Answer online reading questions and answer by Thursday by 5:00 p.m.		
Week 10 – 3/20 – 3/26 12. Spring Break!	Have some much needed rest and fun.		
Week 11 – 3/30 13. "Urinary System"	14. Read Chapter 7 in textbook.15. Read Urinary System online.16. Answer online reading questions and answer by Thursday by 5:00 p.m.		
Week 12 – 4/6 17. "Central Nervous System" 18.	19. Read Chapter 8 in textbook.20. Read Central Nervous System online.21. Answer online reading questions and answer by Thursday by 5:00 p.m.		
Week 13 – 4/13 22. "Hemopoietic System" 23. Quiz 3 (chapters 7, 8, and 9) next week	24. Read Chapter 9 in textbook.25. Read Hemopoietic System online.26. Answer online reading questions and answer by Thursday by 5:00 p.m.		
Week 14 – 4/20 27. "Reproductive System" 28. Quiz 3 in the HLRC at 12:30 to 1:30 p.m.	 Read Chapter 10 in textbook. Read Reproductive System online Answer online reading questions and answer by Thursday by 5:00 p.m. 		

Week 15 – 4/27 • "Endocrine System" • Quiz 4 (chapters 10, 11, and 12) next week	 Read Chapter 11 in textbook. Read Endocrine System online. Answer online reading questions and answer by Thursday by 5:00 p.m. 	
 Week 16 – 5/4 "Trauma" Quiz 4 in HLRC at 12:30 to 1:30 p.m. Final Presentations are due next week (1/2 of class) Literary Review Papers (paper and electronic due next week) 	 Read Chapter 12 in textbook. In order to receive full credit, you must show proof that you went to the writing center for your papers. 	
Week 17 – 5/11 29. Final Presentations in class today at 12:00 to 2:00 p.m. rm. 4076 (1/2 of class)	30. Submit your <u>paper and electronic</u> copies of your Literary Review Papers today. Electronic version is due by 5:00 p.m.	
Week 18 – 5/18 Final Presentation in class today at 12:00 to 2:00 p.m. rm. 4076 (2 nd ½ of class) attendance is required by all.	31. Final exam is next week.	
Thursday, 5/25 Comprehensive Final Exam in the HLRC 10:00 to 12:45 p.m.	32. Study well!!! 33. Relax, you'll be great!! 34.	

CALENDAR:

Final exams for the spring semester are 5/22/17 - 5/26/17 Classes for the Summer of 2017 session beginning on Tuesday, May 30th.

Literary Review Instructions

1. We will be starting the final presentations two weeks before final examinations. These will be graded, since it is part of your research paper grade. Your paper is worth 70% of your class grade.

Make sure your papers are error free, and your Power Point format is correct:

- 1. Title
- 2. Introduction
- 3. Bullets of topics to discuss during presentation (not written out paragraphs)
- 4. Conclusion
- 5. Bibliography (total of 6 references as a minimum)
- 2. Above all else, make sure you can present your research paper. Do not wait until right before class to see if your USB flash drive will "work" or not. If you can not present your Power Point presentation, you will receive a zero score for this part of your grade.
- 3. Please save your papers on a flash drive titled as "yourname.doc". (i.e. BonniePatterson.doc) I will rename your papers, so the judges will not know whose is whose. Please do not put your name anywhere inside of your research papers.
- 4. Lastly, your electronic and paper versions of your paper are due at the date shown on your syllabus. Please make sure they are in Microsoft Word format and upload your papers to Canvas (use the library computer if you do not have this software).
- 5. When presenting your paper to the class, please be professional. Stand up, and project your voice so everyone can hear you. Do not sit down, and read from the computer screen. We can not hear you if you are looking down the entire time. This is your time to really shine!!!

If you have any questions or comments about any of this, please do not hesitate to ask.

~Bonnie ©

WORKING PRESENTATION EVALUATION SHEET

<u>RT65</u>

STUDENT NAME:
TOPIC:
TOTAL NUMBER OF POINTS EARNED (100 points possible):
GRADING:
<u>Organization of Ideas:</u> (50 points) for orderly sequence of ideas and adequate explanation of the material.
<u>Presentation:</u> (50 points) for projecting his/her voice, avoiding distracting mannerisms, having five citations in the bibliography, a title, using Power Point, no
spelling/pronounciation errors and for <u>staying within the 5-minute limit</u> .

FINAL PRESENTATION EVALUATION SHEET

<u>RT65</u>

STUDENT NAME:
TOPIC:
TOTAL NUMBER OF POINTS EARNED (100 points possible):
CDADING
GRADING:
<u>Content</u> : (50 points) Relevance to subject, slides clearly visible, well presented (no type-o's), logical order, 5 works cited minimum.
<u>Presentation Skills:</u> (50 points) Verbal, presentation skills – order of text vs. pictures, interaction with audience, reading vs. developed thought as presentation, relevant images i.e. stats of research, tables, graphs etc., written material – good use of font and color, use of scientific vocabulary, no pronunciation errors, effectiveness – ten-minute maximum, Power Point on desk top ready for presentation.

Writing Your Scientific Paper

PAGE NUMBERING

Pages are numbered consecutively beginning with the first page of the paper following_the title page. The title should appear on page 1 as well as on the title page. This is important because papers are judged with the title page removed. The main sections of the paper may be separated and identified with appropriate headings such as Introduction, Methods and Materials, Discussion, Case Studies (if applicable) and Conclusion or Summary, but this is optional. Use your own judgment. Tables and figures may be included within the paper and Power Point presentation only to verify information. Each table or figure must have a numbered caption that is referred to within the paper (i.e.: Figure 1 or Table 1).

REFERENCES

References should be written following the AMA Manual of Style. References are listed in the order they are cited, <u>not alphabetically</u>.

AMA STYLE

American Medical Association Manual of Style, 9th edition

Authors

- The author's surname is given followed by their initials without punctuation. Example: Smith LK, Witherspoon XM, Lovelace J, Garcia LL Jr, Roentgen W, Lee SC
- The names of all authors are given separated by commas. If there are more than 6 authors, then include only the first 3 followed by et al.

Example: Smith LK, Witherspoon XM, Lovelace J, et al

Titles

• Titles of books are written in normal title case and italicized.

Examples: Genes, Radiation, and Society: The Life and Work of H. J. Muller

• Titles of journals are written in normal title case and italicized. Names of journals can be abbreviated.

Examples: Radiologic Technology, N Engl J Med, JAMA

• Titles of journal articles have only the first letter of the first work capitalized.

Examples: Nephrostomies on irradiated fruit flies

BOOK

Author(s). Title of Book. Place of Publication: Publisher; Date.

1. Okuda M, Okuda D. Star Trek Chronology: the History of the Future. New York: Pocket Books; 1993.

JOURNAL OR MAGAZINE ARTICLE (with volume numbers)

Author(s). Title of Article. Title of Periodical. Date; Volume: Pages.

2. Wilcox RV. Shifting roles and synthetic women in Star Trek: The Next Generation. Stud Pop Culture. 1991;13:53-65.

NEWSPAPER, MAGAZINE, OR JOURNAL ARTICLE (without volume numbers)

Author(s). Title of Article. Title of Periodical. Date; Pages.

 Di Rado A. Trekking through college: classes explore modern society using the world of Star Trek. Los Angeles Times. March 15, 1995:A3.

ENCYCLOPEDIA ARTICLE

Author(s). Title of Article. In: Author(s). Title of Book. Volume. Place of Publication: Publisher; Date: Pages.

4. Sturgeon T. Science fiction. In: Lorimer LT, editorial director; Cummings C, ed-in-chief; Leish KW, managing ed. The

Encyclopedia Americana. Vol 24. International ed. Danbury, Conn: Grolier Incorporated; 1995:390-392.

BOOK ARTICLE OR CHAPTER

Author(s). Title of Article. In:Author(s) Title of Book. Volume. Place of Publication: Publisher; Date: Pages.

5. James NE. Two sides of paradise: the Eden myth according to Kirk and Spock. In: Palumbo D, ed. Spectrum of the Fantastic. Westport, Conn: Greenwood; 1988:219-223.

ERIC DOCUMENT

Author(s). Title of Article. Place of Publication: Publisher; Date. Other Information.

6. Fuss-Reineck M. Sibling Communication in Star Trek: The Next Generation: Conflicts Between Brothers. Miami, Fla:

Annual Meeting of the Speech Communication Association; 1993. ERIC Document Reproduction Service ED364932.

WEBSITE

Author(s). Title of Article. Place of Publication: Publisher; Date. Available at: Other Information. Accessed: Date.

7. Lynch T. DSN Trials and tribble-ations review. Psi Phi: Bradley's Science Fiction Club Web site. 1996. Available at: http://www.bradley.edu/campusorg/psiphi/DS9/ep/503r.htm. Accessed October 8.1997.

JOURNAL ARTICLE ON THE INTERNET

Author(s). Title of Article. Title of Periodical. Date; Volume:Pages. Available at: Other Information. Accessed: Date.

8. McCoy LH. Respiratory changes in Vulcans during pon farr. J Extr Med [serial online]. 1999;47:237-247. Available at: http://www.infotrac.galegroup.com/itweb/nysl_li_liu. Accessed April 7, 1999.

NOTES

- Items are listed numerically in the order they are cited in the text.
- ➤ If you are using a typewriter and cannot use italics, then use underlining.
- Authors: use initials of first and second names with no spaces. Include up to six authors. If there are more than six, include the first three, followed by et al. If
- > no author is given, start with the title.
- ➤ Books: include the edition statement (ex: 3rd ed. or Rev ed.) between the title and place if it is not the first edition.
- ➤ Place: use abbreviations of states, not postal codes.
- ➤ Journals: abbreviate titles as shown in Index Medicus. If the journal does not paginate continuously through the volume, include the month (and day).
- ➤ Websites: include the name of the webpage, the name of the entire website, the full date of the page (if available), and the date you looked at it.
- For further descriptions of references see the AMA Manual of Style in our faculty office or the JAMA website http://jama.ama-assn.org/info/auinst_req.html#refs.

CASE STUDY

Email/Personal Communication Citation: 3.13.9

When referencing communication from an e-mail or e-mail listserve message, AMA regards them as personal communications and should be listed in the text and NOT in the reference list. The in text reference should be in parenthesis and include the name and highest academic degree(s) of the person who sent the message and the date the message was sent. You should also clearly indicate whether the communicatin was oral or written and include online email

Example: e-mail (In text citation) 3.15.9

- Similar findings have been noted by G. P. Mackenzie, MD (email communication, January 2012).
- The latest data on the ecological impact of the Gulf of Mexico's marine mammals shows the affect oil spills have had on the immune systems of aquatic organisms (Gerald P. Mackenzie, MD, e-mail communication, January 2012).

Example: listserve (in text citation) 3.15.9

- The American Association of Colleges of Nursing (AACN) will be hosting an award ceremony announcing the winners of the Innovations in Professional Nursing Education(Susan H. Scherer, MD, AACN listserve, November 29, 2011).
- Research funding opportunities in the field of nursing education. AACN listserve discussion. January 11,
 2012. http://www.aacn.nche.edu/networks/bonus/listserve. Accessed January 25, 2012

Example: oral communication (in text citation)

- According to the drug manufacturer (C. E. Beaton, oral communication, December 2011), the drug became available in France in May 2010.
- In a conversation with M. A. Rosenberg, MD (January 2012)....
- According to a letter from J. P. Mackenzie, MD, in January 2012....



Santa Rosa Junior College Radiologic Technology Program

Authorization to Access Medical Records

I, undersigned,	hereby authorize	, a			
student at Santa Rosa Junior Coll other records for the purpose of c	ege, to have access to my medical records, radiographs conducting academic research.	, and			
In no way will the results or publication of this research will bear my true identity.					
Name:					
Signature:					
Date:					

Santa Rosa Junior College, 1501 Mendocino Avenue, Santa Rosa, CA 95401

Title Page Example

Crohn's Disease

Your Name RT65

Bibliography (example)

Note: (references are numbered in the order they appear in the paper, not alphabetical.)

¹ Crohn's & Colitis Foundation of America. http://www.ccfa.org/ Accessed February 5, 2005.

² Leiken J.B. M.D., Lipskey M.S.,M.D., In: Complete Medical Encylopedia, New York:Random House Reference. 2003. P420.

- ³ *Merck Manual of Medical Information*. 2nd home edition. Merck research labortories. Whitehouse Station. NJ. 2003
- ⁴ Marshak & Linder. *Radiology of the small intestine*. Saunders Company: Philadelphia, PA 1970. Regional Enteritis P.159-159.
- http://health.yahoo.com/centers/digestive/81.html
 Accessed April 7, 2005.
- ⁶ Lippincott, Williams, Wilkins. *Professional Guide to Diseases*. Springhouse: 1998. P690
- ⁷ Drazen, Gill, Griggs, et al. Cecil Textbook of Medicine. 2000.
- ⁸ Crohn's Disease Resource Center, HealingWell.com
 http://www.healingwell.com/ibd Accessed February 5, 2005.

RADT 65 Pathology Papers Grading Rubric

Points for each expectation and 10 points matching the type of paper description

Expectations:

•	Double spaced, 12 font, 1" margins on all sides Pages numbered and ≥ 7 pages	(10)
•	Educational or technical value – comprehensive review of paper Scholarship, depth of research, organization, logical presentation Mechanics – style guidelines, spelling, & grammar	(15) (20) (20)
•	AMA style of writing Citations formatted and in order correctly in the body of the paper References formatted correctly and in order of appearance	(15) (10)

Case Study (10)

- Description of pathology including natural progression without treatment
- Course of disease or condition on this particular patient
- Prognosis (if patient lives)

Pathologic Condition (10)

- A disease or condition diagnosed through medical imaging
- Examples: AIDS, breast cancer, TB, fractures, child abuse
- Choose an approach which offers **new** insight to the radiologic technologist

Comments:

STUDY GUIDE FOR THE RADT65 FINAL

These are some areas to focus on. The exam will be on lecture and textbook information.

- Review the following pathologic terms:
 - o Signs
 - o Symptoms
 - o Prognosis
 - o Syndrome
 - o Diagnosis
 - o Iatrogenic
 - o Idiopathic
 - Morbidity rate
 - o Mortality rate
 - o Virulence
 - o Epidemiology
- Review the order of cell necrosis
- Review disease classifications
- Review Esophageal Atresia
- Review the staging of cancer
- What is adenocarcinoma
- What is esophageal atresia
- What is the difference between a diverticulum and a polyp
- What is regional enteritis
- What is celiac disease
- Review the different types of hernias
- What is Hirschsprung's disease?
- What is Ulcerative colitis
- What are leiomyomas?
- Review the different types of ileus'
- What is indicative of colon cancer
- Review how bones are formed
- Review the different types of joints
- Review the anatomy of bones
- What is Achondroplasia
- What is the difference between osteopetrosis and osteoporosis
- What is Osteomyelitis
- Review osteoarthritis & Rheumatoid arthritis
- Review osteoid osteoma, osteoma & osteochondroma
- What is the difference between kyphosis and scoliosis
- Review the Cauda Equina, Dura, Pia, and Arachnoid layers of the nervous system
- Review the blood brain barrier
- Review the common neoplasms of the nervous system
- Review the spinal cord and meninges
- Review meningitis
- What is an HNP?

- Review atherothrombic brain infarction
- Review asterocytomas, meduloblastomas, & meningiomas
- Review the cranial nerves
- What are neurofibromas, acousite neuromas, & schwannomas
- How does gigantism occur
- Review the terms Coup and Contrecoup lesions
- Review the different types of fractures
- Review trauma of the shoulder
- What is avascular necrosis
- Review the terms atelectasis, pneumothorax, hemothorax, empyema, & pleurisy
- Review and understand the roles of the terms duodenum, jejunum, ileum, & cecum
- Review Battered Child Syndrome
- Review the different levels of medical centers
- Review what a hematoma does
- What is a Nephroblastoma
- Review the process of production and excretion of urine
- What is a horseshoe kidney
- Review the terms ureterocele, vesicoureteral reflux, urea, bilirubin, nitrogen, calcium, nephrocalcinosis, pyelonephritis, & renal calculus
- Review renal failure
- Review hydronephrosis
- Review Hyaline Membrane Disease
- Review the different types of pneumonias
- What is the "sail sign"
- Where do mediastinal masses originate
- What are the primary risk factors for breast cancer
- Review the characteristics of calcifications
- Review the characteristics of masses
- Review the terms galactocele, fibroadenoma, hamartoma, papilloma, & lipoma