

MAT 6930 – Research Seminar (CRN 12469), Spring 2018

Instructor: *Jaffar Ali Shahul-Hameed, Ph.D., Associate Professor.*
Office, Email & Ph.: *AB7 – 206, jahmeed@fgcu.edu, and 590-1470.*
Webpage: *CANVAS (fgcu.instructure.com) or www.jaffar.org*
Extra Help Sessions: *Wed & Fri: 10:30-11:30am or by appointment.*
Class Hours: *Wed & Fri: 4:30-5:45pm in WH 269, Credit: 3 hours.*

Course Description: Capstone experience designed to familiarize students with the process of mathematical research, and requires an oral and written presentation of a project.

Text: Selected Sections from Various Resources/Reading Materials.

Prerequisites: MAA 5229 with a minimum grade of B and MAS 5312 with a minimum grade of B.

Learning Outcomes:

- Demonstrate library research skills in the area of mathematics,
- Critique mathematical presentations, and
- Produce a graduate level oral and/or poster presentation of a non-trivial mathematical topic at Research Day
- Write a final report using LaTeX about a non-trivial mathematical topic.

Grading Policy:

Assignments	Points %
Project Abstract and Plan	10%
Presentations and Participation	25%
Mid-Term Project Report	25%
Research Day Presentation (April 17, 2018)	5%
Final Project Report	35%

Percentage Ranges for Letter Grades:

%	91-100	89-91	86-89	82-86	79-82	76-79	70-76	60-70	0-60
Grade	A	A-	B+	B	B-	C+	C	D	F

Important Note: This course requires significant amount of literary (re)search and enormous amount of outside reading and problem solving. Based on the project that a student chooses, student needs to spend significant amount to time in mathematical rigor analysis and lots and lots of critical thinking. Students are required to learn 'LaTeX' as a documentation tool of their work, that is, mid-term project and final project reports needs to

submitted via the latex document. LaTeX is an open source software. Here is a link of MikTeX (LaTeX compiler) which accompanies a free editor: <http://miktex.org/> . There are ample open source and shareware LaTeX editors on the web, feel free to use any of them you like.

Assignments: There will be a course project, which requires mid-term report and a final report. Progress of these projects will be presented in the class.

Due Dates:

Assignment	Due	Submission	%
Weekly Presentations and Participation	Weekly	In Class Presentations	15
Three Topics	01/15	CANVAS and In Class	5
Research Title, Abstract and the Research Plan	01/29	CANVAS and In Class	5
Literature Review	02/12	CANVAS and In Class	5
Mid-term Report	02/26	CANVAS	15
FGCU Research Day Form Submission	03/02 by 5:00pm	Ask your research mentor to submit the Research Day Form by 5:00pm on March, 2, 2018 on this page: https://www2.fgcu.edu/ORSP/index.html	5
Research Day Presentation	04/17	Poster/Oral Presentations	10
Final Presentation	4/20-27, 5/04	In class Presentations	15
Final Report	4/25	CANVAS	25

1. List of Three Topics for the Project: Submit it on CANVAS by Monday, Jan. 15, 2018.
2. Title, Abstract and the Plan for the Project:
 - a. Submit it on CANVAS by Monday, Jan. 29, 2018.
 - b. Bring a hard copy to the class on Wednesday, Feb. 1st
 - c. Prepare a 10 minutes presentation to be presented in class on Feb. 1st.
3. Literature Review: Submit it on CANVAS by Monday, Feb. 12, 2018.
4. Mid Term Report (Introduction, Literature Review, Problem/Conjecture/Focus):
 - a. Submit the report by Monday, Feb. 26, 2018.
 - b. Prepare a 15 minutes presentation to be presented in class on Wednesday, Feb. 28th.
5. Research Day Abstracts Due: Mar. 2, 2018, Friday.
 - a. Ask your research mentor to submit the Research Day Form by 5:00pm on March, 2, 2018 on this page: <https://www2.fgcu.edu/ORSP/index.html> (Failure to do so may result in not participating in Research Day, which will result in failure in the course).
6. Research Day Presentations: Apr. 17, 2018, Tuesday.
 - a. This is not our class day, it usually runs whole day. Make appropriate plans well ahead and schedule yourselves so that you will be available for the entire Research Day.
7. Final Presentations: Apr. 20 - 27, 2018 and May 04, 2018*.
 - a. Prepare a 40 minutes presentation of your research project. This will be a colloquium/lecture series type event where you will be presenting your work to a general audience (both math and non-math undergraduate, graduate students and faculty).
8. Final Report Due: Apr. 25, 2018, Wednesday.

Attendance: You are expected to attend every class and are responsible for all information given out during them. This course requires your full effort, so it is expected that you will give your complete attention to the instructor for the full class period. Activities such as sleeping, reading, listening to headsets, operating unapproved electronics (e.g. cell phones, computers, PDA, etc.), conversing with other students, and so on do not constitute class participation and will be noted as an absent. Please turn off all unapproved electronics during class periods. Students engaging in such behavior during the lecture may be asked to leave the room.

If you are absent and miss an announcement, assignment, a lesson plan change, or some handout you are responsible to seek out that information from a classmate. Office hours will not be used to re-teach a lesson missed due to student absence.

An authorized absence is an absence due to participation in a sponsored activity that has been approved in advance by the program director and the appropriate student affairs officer. Such an absence permits the student to make up the work missed when practical or to be given special allowance so that he/she is not penalized for the absence. An excused absence is an absence due to other causes, such as illness, family emergency, death in the family, or religious holiday. A student seeking an excused absence should obtain documentation such as a physician's statement, accident report, or obituary and contact all instructors or the Office of the Dean of Student Affairs. Valid documentation does NOT include notes from your parents, roommate, etc. If you are seen at Student Health Services, be sure to obtain a walkout statement to be used as valid documentation.

Although students are graded on intellectual effort and performance rather than attendance, absences from several meetings of the course, excused or otherwise, may result in a lower grade. Only students registered for this course and this section may attend class meetings without advance permission of the instructor.

If you miss an assignment due solely to authorized or excused absences, you must bring documentation to your lecture instructor during office hours. In the event a make-up is allowed (except for the final exam) it should be completed within a week from the end of excused time period or by the last day of classes, whichever is earlier; otherwise, zero will be given as a credit for that assignment. If you miss a lot of class or assignments, whether as a result of authorized, excused, or unexcused absences, you may need to withdraw from the course.

Attendance will be taken on random days (may be every day). There will be 5% points for the attendance. A percentage will be deducted for each recorded missing class. University authorized/approved excuses will be exempted. For more information, read the catalog (<http://www.fgcu.edu/catalog/08-09/FullFGCUCatalog08-09.pdf>).

Grade Disputes: If you have a dispute with a grade recorded by the instructor, you must present the graded assignment to the instructor in order to obtain a change-of-score. It will be your responsibility to keep all of your returned assignments. Scores will NOT be changed without the original assignment being presented to the instructor.

Important Days: Check Gulfline (gulfline.fgcu.edu) for the latest update on the Final Exam, Drop Dates, etc., and those dates are final.

Email Communication: Email communication will be done through the FGCU system to your FGCU email account (.....@eagle.fgcu.edu) or FGCU Angel account. It is your responsibility to check your accounts often. In order to improve the communication and to assist the instructor in replying to emails in a timely manner, this email policy will be strictly enforced.

When sending emails to your instructor, the following rules must be adhered to:

1. The subject line of the email must contain the course name
2. The email must be signed with your first and last name.
3. The email must be written in Standard English.

If your email does not meet the above criteria, you must resubmit your email in the proper format in order to receive a reply. I usually reply to emails within two business days. If you do not receive a reply within that time frame, check that your email was sent in the proper format and resubmit if necessary. I thank you in advance for sending your emails as requested.

Lecture Capture: This course may employ technology that will allow for audio and/or video recording of live classroom sessions. This lecture capture technology is utilized primarily for purpose of enhancing student learning. It may provide for supplemental student instruction via secure links to recorded session(s), the live stream of courses, presentations of off-site guest speakers and/or the delivery of course instruction utilizing “flipped classroom” or other methodologies. Student questions and/or comments may be included as a part of any session being recorded. See FGCU-CAPTURE for additional details and training <http://aets.fgcu.edu/fgcucapture.asp>.

An assignment that requires audio, video or image recording of the work by students, individually or in groups (s) may be published publically either in YouTube or similar publicly available websites. If you have any disability or concern or unable to complete such assignments, please let me for a reasonable accommodation.

Audio and Video Recording: Video and audio recording of class lectures is expressly prohibited unless the FGCU Office of Adaptive Services has documented your disability and determined the best reasonable accommodation for you is to allow recording and you have executed a written agreement regarding the limitations on use of such recordings and their disposition at the end of the semester.

Academic Behavior Standards and Academic Dishonesty: All students are expected to demonstrate honesty in their academic pursuits. The university policies regarding issues of honesty can be found in the FGCU Student Guidebook under the *Student Code of Conduct* and *Policies and Procedures* sections at <http://studentservices.fgcu.edu/judicialaffairs/new.html>. All students are expected to study this document which outlines their responsibilities and consequences for violations of the policy.

In all course work, assignments and examinations, students are expected to adhere to the following Code of Honor: "As a Florida Gulf Coast University student I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do."

This policy applies in particular to our homework assignments. Discussing assignments with other members of the class is permitted, even encouraged, but the work that you turn in should be your own. If you don't understand an argument, don't take credit for it. Verbatim copying is not acceptable. Academic dishonesty will be dealt with according to the FGCU policy. For More information, read the booklet "Student Code of Conduct".

Disability Accommodations Services: Florida Gulf Coast University, in accordance with the Americans with Disabilities Act and the university's guiding principles, will provide classroom and academic accommodations to students with documented disabilities. If you need to request an accommodation in this class due to a disability, or you suspect that your academic performance is affected by a disability, please see me or contact the Office of Adaptive Services. The Office of Adaptive Services is located in the Wellness Building. The phone number is 239-590-7956 or Video Phone (VP) 239-243-9453. In addition to classroom and campus accommodations, individuals with disabilities are encouraged to create their personal emergency evacuation plan and FGCU is committed to providing information on emergency notification procedures. You can find information on the emergency exits and Areas of Rescue Assistance for each building, as well as other emergency preparedness materials on the

Environmental Health and Safety and University Police Department websites. If you will need assistance in the event of an emergency due to a disability, please contact Adaptive Services for available services and information.

Student Observance of Religious Holidays: Kindly visit the following webpage for full university policy at the General Counsel Policies: <http://www.fgc.edu/generalcounsel/policies-view.asp>

Electronic Devices: All pagers, cell phones and other electronic equipment should be turned off during class. This includes text messaging. Checking email or browsing during the class is considered as inappropriate and disruptive behavior. Violators will be asked to leave the class or directed to appropriate authorities/offices.

This syllabus is subject to change at the instructor's discretion.

Name (PRINT): _____

Signature: _____

Date: _____