

Course Syllabus
MTH 690: Advanced Distribution Functions
Fall Semester 2010

Course:

Title : MTH 690 – Advanced Distribution Functions

Section: 101

CRN : 3264

Classes: MW 6:30 – 7:45 PM SH 509

Instructor:

Dr. Alfred Akinsete

Morrow Library – ML 110

Phone number 696 3285

Email Address – akinsete@marshall.edu

Office Hours:

TR 9:00 – 12:00 PM

Any other time by appointment

Course Description, Objectives, Credits, and Prerequisites:

Description: Historical remarks, genesis and properties of some univariate discrete and continuous distributions, including but limited to the general families of discrete distributions, Logarithmic and Lagrangian distribution, Mixed Distributions, Lognormal, Cauchy, Rayleigh, Pareto, Weibull, and some other distributions including the multivariate distribution. Review of some papers on distribution functions.

Objective: The objective of this course is to expose students to some other important statistical distributions beyond the basic distribution that are usually treated in introductory statistics textbooks. The course is therefore intended to assist students to develop more skills and acquire knowledge in statistical distributions, to the point that they may see the interrelationships and usefulness of these distributions in modeling data arising from other disciplines.

Credit Hours: 3

Prerequisite: MTH 445/MTH 446, or their equivalents.

Some of the textbooks to be consulted:

1. Balakrishnan, N. Nevzorov, V. B. *A Primer on Statistical Distributions*. (2003). Wiley, NY.
(Main textbooks for the course)
2. Evans, M., Hastings, N., and Peacock, B. *Statistical Distributions*. (2000). 3rd edition. Wiley, NY.
3. Johnson, N. L., Kemp, A. W., and Kotz, S. *Univariate Discrete Distributions*. (2005). (3rd edition). Wiley, NY.
4. Johnson, N. L., Kotz, S., and Balakrishnan, N. *Continuous Univariate Distributions*. (1994). (2nd edition). Wiley, NY.

5. Balakrishnan, N., Castillo, E., and Sarabia, J. M. *Advances in Distribution Theory, Order Statistics, and Inference*. (2006). Birkhauser, Boston.
6. Consul, P. C., and Famoye Felix. *Lagrangian Probability Distributions*. (2006). Birkhauser, Boston.

Attendance

Students are expected to attend all scheduled classes. It is the student's responsibility to find out what was discussed in a missed class. Although, attendance records will not be used to compute grades (except possibly in borderline cases), however, missing class can be expected to significantly reduce your chances of success. Note also that it is the student's responsibility to present approved notice of any absence that would be excused under the terms and regulations stipulated by the university.

Academic Dishonesty

I really hate to say this, but MU compels me to tell you. In a case where a student is suspected to have cheated, the student may be asked to re-take the test. And where the student is found or confirmed to have cheated, a zero grade will be awarded to the student.

You may wish to refer to other university policies concerning academic dishonesty at,

http://www.marshall.edu/catalog/undergraduate/ug_09-10.pdf

My advice would be that you should not get yourself involved in academic dishonesty. I will prosecute to the fullest extent of the MU Catalog.

Other Policies

- Information regarding the university policy for students with disability can be found in <http://www.marshall.edu/disable>
- Statement regarding University Computing Services Acceptable Use Policy can be located at <http://www.marshall.edu/ucs/CS/acceptuse.asp>
- Statement regarding Marshall's policy about inclement weather can be found in the link http://www.marshall.edu/www/policy/policy_07.html
- Statement regarding Marshall's policy on Affirmative Action can be found in the link www.marshall.edu/eeoaa/Forms/EEO-Policy.pdf

Homework

Homework problems will be collected and graded. Make it a habit to do your homework the same day they are assigned. Ensure to submit your homework as at when due. Submission within 24 hours from when it is due will be based on 80% of full credit. No late submission will be accepted after 24 hours from when it is due. You are welcome to collaborate with other students on homework, although you must turn in your own work, and written in your own style and words. Solutions to problems must be made clear and neat. In cases where solutions require detail explanation and derivations, a one-number solution will not be accepted. Homework exercises assigned on a Monday (Wednesday) shall be due for submission the following Wednesday (Monday).

Student Behaviors

Students are advised to turn their cell phones and other noise generating devices off prior to entering the class. In the case where a student awaits any emergency call, the noise should be restricted and made personal. And in this case, I should be notified as soon as the student enters the class. Food items, apart from water or soft drink, are not allowed in the class. The reading of newspapers and other unrelated materials while the class is in session is prohibited. Please ensure that other students are respected.

Examination

The final grade will be based on the following components:

Mid-Term Test	100 points [10/13/2010]
Homework	100 points
*Reviews of articles (50) and a presentation (50)	100 points
Final Examination	100 points (Comprehensive)
Total	400 points

The semester grade will be based on the percentage of the 400 total possible points, using the following scale.

90 -100%	-- A
80 - 89%	-- B
70 - 79%	-- C
60 - 69%	-- D
0 - 59%	-- F

FINAL EXAMINATION: Monday December 13 [6:30 PM – 8:30 PM]

*Few articles will be reviewed (critics, contributions), and a presentation on any of the reviewed articles.

A short summary of my teaching philosophy

The following is a short form of my teaching philosophy. It is intended to inform you of my teaching style and what I expect from you in the course of our teaching and learning. My teaching philosophy is guided by the axiom 'Tell me, I'll listen, show me, I'll understand, involve me and I'll learn', which elevates involvement and participation as key issues in the learning process. Reflecting on my teaching, I recognize the magnitude of the impact I am to my students. As a faculty, my primary goals are to provide qualitative teaching, nurtured by quality research and other services to the university and the community within their respective foci and mandates. In the discharge of this responsibility, especially in the teaching of mathematical sciences courses, I see the learners as the focus, the teacher as facilitator, resource, organizer, participant and assessor, while the classroom becomes part of the rich learning environment, where learners are assisted to develop those skills that promote life-long learning in their various vocations. Over the years, I have seen myself *teaching students*, rather than only *teaching them mathematics and statistics*.

I have embraced **learner centeredness** in the course of my teaching profession, through the use of tasks and activities that promote learner autonomy and encourage students to become problem solvers as these have beneficial influence on learning as well as the dynamics of the classroom itself. The beauty of the learner centered approach is that it allows the teacher to understudy each group of learners and also offers the teacher the benefit of switching smoothly between the roles of facilitator, resource, organizer and participant in order to enhance learning, rather than being the focus in the classroom. I therefore see it with utmost responsibility to organize my courses and conduct myself in a manner that allows students to benefit immensely from this approach. I fervently believe that different

levels of teaching and different categories of learners place before the teacher different demands and challenges. Ultimately however, students who are encouraged to take responsibility for their learning by effective participation and involvement in class through direct interaction with instructors and course-mates emerge matured and independent, and they are capable of navigating successfully through challenges in their work place. I have found out that students are generally willing to participate as long as they are made to understand the significance of the process, and not a way to uncover their ignorance, if any.

Obviously, some students initially are negatively disposed to this approach particularly in a learning culture that reveres the teacher as a repository of knowledge. Also learners who are timid may readily not adjust to this method. With counseling, persuasion and perseverance, such students soon realize that the whole essence of learning itself is the development of the learner through interaction and involvement and they too become very comfortable as they readily blend with others in the class. I encourage my students to interact with one another and work in small groups. This affords the students the opportunity to engage in interpersonal relationship, be more relaxed, and ultimately benefit from one another.

One of the great attributes of being an excellent teacher is to also be teachable. An individual is not an island of knowledge, and there are great and many ideas and resources that one could learn from others. To this end, I solicit feedback from my students in the middle of the semester, rather than having to wait for the usual end of semester evaluation. I also meet regularly with class representatives on what are needful to be addressed to ensure that a healthy environment is created and maintained for learning. This self assessment allows me to address any problems that might have arisen in the course of teaching and learning.