

## MAT 100 Sec 890

## Nature of Mathematics (online)

Fall 2017

### Professor

Prof. S. Clayton      Office: Math 231A      Tel: 410-777-2565

### Email

[sclayton1@aacc.edu](mailto:sclayton1@aacc.edu) or through Canvas (Include name and MAT 100 in the subject line or at the start of the message unless you email through Canvas.)

### Office hours

Mon 10:30am – noon (MATH 231A),

Mon&Wed 9 – 9 :45pm (MATH 231A),

Thur 9 – 9:30pm (MATH 231A),

Fri 5:30-6:30pm (MATH 231A), Sat 11-11:30am (AMIL 314)

Virtual Math Center: Thursday 9:30-10:30pm (must enroll into Virtual Math Ctr.)

*Day appointments at other times offered by request. (No other evenings possible.)*

### Free Tutoring:

For extra help (walk in math labs and math computer labs): Library 102, AMIL 206, and possibly CRSC 190

**Tutors may have limited knowledge of subject matter, bring materials e.g. required reading.**

**SmarThinking tutoring** is also available through MyAACC. Refer to your “Self-Services” page or ask me about it.

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- Are you an independent learner that is inspired by math that the “real world” is using?
- Are you willing to read this syllabus in detail and follow all procedures laid out within?
- Are you in a pathway where a MAT 100 course is sufficient?
- Do you have at least 12 hours every week to spend learning and practicing mathematics?
- Are you planning to take all 3 exams in the Arnold testing center (main campus) during assigned testing days? (Otherwise don't forget to make arrangements with Prof. Clayton-even if it is just for testing at Arundel Mills)
- Are you going to come in for extra help when needed or seek help elsewhere (seeking help elsewhere may be difficult since the topics we cover are unusual math topics)?

**Then this class is definitely right for you.**

**Otherwise** study the syllabus extremely carefully to find out if this course will meet your needs and contact Prof. Clayton if you need extra information.

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Deadline to **drop** the course getting all money back: **Oct 28**.

Deadline to **withdraw** from the course with NO money back and a grade of W on the transcript: **Dec 6**.

**Last day to take the Final Exam: Thursday, Dec 14** (start by 6pm, testing center closes at 8pm)

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### Course description:

Encounter mathematical reasoning through an exposure to inductive methods, problem-solving techniques and the organization of information to discover patterns. Explore geometric topics and the connections between mathematics and the arts, and the social sciences. Study topics such as management science, sequences, fractals, mathematics of finance, probability and statistics.

## Course Learning Outcomes

Upon successful completion of this course, students will be able to:

- Apply appropriate modeling methods to solve real world problems.
- Apply elements of management science to solve routing and planning problems.
- Recognize mathematical patterns and represent them symbolically.
- Interpret mathematical information presented verbally, numerically, graphically, and symbolically.
- Draw inferences from mathematical models such as formulas, graphs, and tables.
- Describe how mathematics is employed in diverse areas such as art, architecture, the social sciences, and nature.
- Apply interest formulas to solve problems involving finance, savings, and loans.

## Course Materials:

### Mathematics computer supplement (free of charge):

Enroll for **online homework and Media Lessons** at “MyOpenMath.com”, using Enrollment Key **MAT100FA17** and course ID is COURSE ID: **25575**.

### Textbook:

There is NO required textbook for the course. I believe in quality materials that are free to the student – called Open Educational Resources (OERs). Most materials that we are using are based on David Lippman’s textbook “Math in Society, 2<sup>nd</sup> Edition” ( <http://www.opentextbookstore.com/mathinsociety> ) You do NOT need to print out the pdfs of the chapters we are covering since we usually use selected portions of the chapters. These will be posted in Canvas.

If you purchased the MAT 100 Tannenbaum “Excursions in Modern Mathematics” textbook from the bookstore or an access code, **please return these immediately for a refund**. The bookstore has very strict return policies, so read your receipt very carefully for the timeline.

If you purchased the Tannenbaum textbook from a source where you cannot return it, you can use it for reference. (It may come in handy, but it is NOT necessary to have access to the Tannenbaum “Excursions in Modern Mathematics” textbook to succeed in this course.)

### Calculator:

The following calculators are approved for this course: Any scientific calculator, or any type of TI 84 or of TI 83. The TI-89 or higher is not allowed in this course. Students with the TI inspire need a TI 84 face plate to use their calculator for this course.

### **Grading Policy: Each student’s grade will be based on the following:**

MyOpenMath Homework and Media Lesson	150 points
Mini Projects	100 points
2 Tests (Arnold campus preferred; paper-and-pencil)	200 points (100 points each)
Final exam (Arnold campus preferred; paper-and-pencil; cumulative)	150 points
Total	600 points

<b>Grading scale:</b>	<b>A: 540 – 600 points (90% – 100%)</b>
	<b>B: 480 – 539 points (80% – 89.9%)</b>
	<b>C: 420 – 479 points (70% – 79.9%)</b>
	<b>D: 360 – 419 points (60% – 69.9%)</b>
	<b>F: below 419 points (below 60%)</b>

**Your course grade can be viewed in Canvas and is updated after each test has been graded.**

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**Email:** Please feel free to email me at any time with any questions or concerns. If you don't email me through Canvas, include YOUR NAME and MAT 100 for reference in the title or beginning of the email message. Check the email from which you emailed me or the email to which you forward your Canvas messages (if you used Canvas) since I will respond replying to your email. **Monday – Friday I will respond to all emails within 24 hours. Note that respond times are 48 hours on weekends.**

Please note: I will NOT reply to email addresses that could be considered offensive or unprofessional.  
Please note: I cannot be reached by texting.

**Use of Technology:** Some Projects will use Microsoft EXCEL. As an AACC student, you can receive Microsoft 365 for your computer or electronic device through MyAACC **for free!**

**WORKFLOW through each module (use CANVAS in addition to MyOpenMath):**

- 1) Work through the required reading in CANVAS – not for points
- 2) Check both, MyOpenMath and CANVAS for Media Lessons and watch all videos. Only the Media Lessons in MyOpenMath are for a grade. Make sure to watch them and submit the statement that you watched them by the due date. Videos in CANVAS are not for points.
- 3) Complete the Activity/Activities posted in CANVAS. Try them yourself rather than studying them from the solutions. Compare your work on the Activities against the solutions – not for points.
- 4) Complete the Homework in MyOpenMath by the due date for a grade.
- 5) If applicable, complete the Mini-Project for the module by the special Mini-Project due date and submit for a grade.

**Mini-Projects:** Label all files you are submitting: “Last Name, First Name, MAT 100, MP, MiniProjectNumber” (MP steht for Mini-Project). Mini Projects are accepted through a provided drop box or as email attachments: Do NOT send them in the body of an email. Late Mini Projects will be accepted up to 5 days after the due date for 50% of the credit.

**File Formats** that are accepted: pdf files, Microsoft Word files, standard picture files, and EXCEL files only. I cannot open wordpad and other non-microsoft files. It is your responsibility to submit Mini Project assignments in file formats listed here by the due dates.

**Homework assignments** are worked in MyOpenMath. They have to be completed by the due date. Each student has 5 Late Passes. Late Passes have to be applied BEFORE a homework set is overdue. The homework due date then is extended by a certain time period. More than one Late Pass can be applied to the same homework.

**Media Lessons** also have a due date. No late passes can be applied to Media Lessons. The Media Lesson is still open after the due date for review, but points will only be given if the assignment is completed before it is due.

**You are expected** to check the Canvas entry page and your school email every other day. You are also expected to keep a copy of the course schedule/calendar on hand and abide by all due dates listed. In addition, Mini-Project dates will be announced as they arise on the Canvas entry page. From announcement to due date will always be at least one week.

*Note: Due dates are non-negotiable and all assignments, Mini Projects, and Tests have to be completed by each due date listed.*

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**The Final Exam (paper and pencil) at the Arnold testing center** is cumulative and will comprise **25%** of your course grade. The dates for the final exam are provided on the course outline and schedule. Bring a pencil and an approved calculator as well as a spare set of batteries (or for rechargeable calculators your calculator fully charged).

**Note that paper-and-pencil exams (on campus) including the final** will comprise **close to 60%** of your course grade. There will be 3 Exams given in the campus Testing Center, which includes the final. The default testing center will be on the Arnold campus (Student Union Building SUN, room 240). **You will need to let me know in advance if you would like to test anywhere else (even if it is another AACC location). Students will not be able to take tests at the Glen Burnie campus.**

**You are expected to take the test in the testing window provided on the course schedule.**

**If you are out-of-area, out-of-state or overseas, please follow procedures outlined below to make arrangements and contact Prof. Clayton well in advance of the first test.** Only approved testing centers at education institutions and commanding officers at military installations are allowed to proctor. Any costs incurred are the responsibility of the student. **AACC testing is free of charge.**

Need to **test out of state or out of the country?** You need to find an approved testing site. Please refer to the testing center site for details.

Out of area students get started at <http://www.aacc.edu/resources/academic-services/testing> (or search the AACC website for “testing”), choose “Distance Learning Testing” click on “Learn more about Distance Learning Testing” and read Paragraph “Distance Learning Testing.” AACC participates in the NCTA Testing Center Consortium. Information: <http://www.ncta-testing.org>

and a map to find a testing site:

[http://www.ncta-testing.org/index.php?option=com\\_content&view=article&id=99:interactive-map&catid=20:site-content&Itemid=144](http://www.ncta-testing.org/index.php?option=com_content&view=article&id=99:interactive-map&catid=20:site-content&Itemid=144)

Tests must be completed by the posted due date on the course schedule/calendar. **Students cannot take tests late.** You will have 2 hours to complete each test. Please allow sufficient time prior to closing time of the testing center to take each test. **Bring a photo id, pencils, eraser, and an approved calculator (see page 2 of syllabus) for testing. Exams will be paper-and-pencil.**

It is each student’s responsibility to bring a calculator to each test. Cell phone calculators and calculators that use a computer algebra system are not permitted. Cell phone use is not permitted while taking any proctored assessment.

**TESTING CENTER INFORMATION (Arnold – Student Union 240) Phone 410-777-2375**

<b>Monday – Thursday</b>	<b>8:30 am – 8:00 pm</b>
<b>Friday</b>	<b>8:30 am – 4:30 pm</b>
<b>Saturday</b>	<b>9:00 am – 1:00 pm</b>

**Arundel Mills hours are shorter. If you are going to Test at Arundel Mills please make sure you know that these hours start later and on Fridays end earlier.** (Please see <http://www.aacc.edu/resources/academic-services/testing> or search the AACC website for “testing.”) **Please inform Prof. Clayton if you would like to take the tests at the Arundel Mills campus.**

Tests will **NOT** be given at **Glen Burnie Town Center**. Sorry for any inconvenience.

### **Make-up policy:**

- **If you have to miss an exam or you did miss an exam, treat me as if I were your employer and you missed work:** Communicate! It is your responsibility to inform me in a timely manner of no replacement of the grade will be offered.
- If I have not returned the test to the class, you may be allowed to take it as long as you notified me right away and it only is happening ONE time. (If you let me know that you are not going to be able to take the test with the class, you will be asked to take the test early.)
- Otherwise the final exam counts as a replacement grade.
- **Only one replacement grade can be earned for each student this semester.** If a second test is missed, a zero will be recorded for the second missed test.

Tip: Take any exam in the testing center early in the designated time-frame. Don't wait until the last day to prevent unforeseen emergencies to become major problems for success in this course.

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### **Course Policis:**

**This is an ONLINE DISTANCE LEARNING COURSE. You will read and learn the material** from the coursework in Canvas and MyOpenMath. You are taking this course in an **accelerated format**, which will mean that you need to be very determined and focused to learn the material **in just 8 weeks**. Make sure to **work on your math most days of the week**. Last minute completion of modules most likely will put your success at risk. Do not take the time commitment for this class lightly. Map out designated undisturbed study times. Include at least one day on the weekend. More than 3 or 4 hours of math in a row usually become unproductive. Try to study fresh and rested. On average, you have to **complete** more than one module per week in this course.

### **Class Expectation of Study Time:**

A minimum expectation is that for every hour spent "in class," you should plan to spend at least two hours "out of class" in preparation. For our class you should expect to spend at least 12 hours per week on our coursework. More important than how MUCH should someone study is HOW should someone study. Studying is a skill, and if students have not developed that skill, they may still struggle regardless of how much time they study. More information about study skills including time management techniques can be found at: <http://ola2.aacc.edu/vc/timemanagement/TimeManagementWebShop/>

Participation is reported to the college and becomes part of your college record. To be counted "participating" you must **complete math work regularly**. As you know, failure to log in to our course and actively participate in the coursework may result in course failure.

**Your response time to emails:** You are expected to respond to Canvas emails from your instructor within 2 days if a response is asked for.

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### **Getting Help:**

- **Email** Prof. Clayton a question through Canvas.
- **Visit** Prof. Clayton during office hours as listed above. Virtual office hours are available as well as Face-toFace office hours. Consider to attend the Friday face-to-face office hour on the Arnold campus.
- Attend **on-campus tutoring** in the Math Lab located at the Arnold and Arundel Mills campuses. (CRSC 190, Library 102, or Arundel Mills AMIL 206). NOTE: not all tutors are able to help with MAT 100 topics.
- **Online tutoring via Smarthinking.** *Smarthinking* is an online tutoring resource available 24 hours a day, 7 days a week. AACC students are entitled to 15 hours of free tutoring, more can be requested (just email your instructor if you run out). Access Smarthinking in your Canvas course through "Self-Services".

**Course Schedule: The course schedule (posted separately) is part of this syllabus.**

We are covering the following modules in this course in the following order:

- Graph Theory: Introduction and Euler
- Finance: Interest
- Probability and Expected Value
- Logic (Arguments)

Test 1 covers the four modules above

- Finance: Loans and Credit Cards
- Graph Theory: Hamilton Circuits
- Graph Theory: Spanning Trees
- Normal Curves and the Empirical Rule
- Descriptive Statistics

Test 2 covers the 5 modules above

- More Descriptive Statistics
- Other Statistical Topics
- Codes and Check Digits

Cumulative Final Exam

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**Canvas Down Time:**

Regularly scheduled system maintenance may occur on Friday evenings. All **college systems may be unavailable** during this timeframe. This includes access to Canvas and MyAACC. Please plan accordingly.

**AACC Notice of Nondiscrimination** (updated: April 10, 2017): AACC is an equal opportunity, affirmative action, Title IX, ADA Title 504 compliant institution. Call Disability Support Services, 410-777-2306 or Maryland Relay 711, 72 hours in advance to request most accommodations. Requests for sign language interpreters, alternative format books or assistive technology require 30 days' notice. For information on AACC's compliance and complaints concerning sexual assault, sexual misconduct, discrimination or harassment, contact federal compliance officer at 410-777-1239 or [complianceofficer@aacc.edu](mailto:complianceofficer@aacc.edu) or the Title IX coordinator at 410-777-2256, or Maryland Relay 711.

**Americans with Disabilities Act Policy** (updated April 10, 2017): The Disability Support Services Office (DSS) provides equal access to educational opportunities for qualified students with disabilities. Students interested in course accommodations must provide relevant documentation in order to receive accommodations. For information, please contact the Program Manager for DSS, at 410.777.2306, email [dss@aacc.edu](mailto:dss@aacc.edu) or visit <http://www.aacc.edu/resources/disability-support-services>. Deaf and hard of hearing students can reach the office by calling Maryland Relay 711 or by emailing [dss@aacc.edu](mailto:dss@aacc.edu).

**Student Conduct:** Students shall at all times conduct themselves in a manner that demonstrates mutual respect and courtesy, displays appropriate standards of behavior, and refrains from any actions or inactions that impinge on the rights of others or disrupt the teaching and/or learning process or the operations of the college. A student found in violation of this policy or any other College policy shall be subject to appropriate sanctions in accordance with the student conduct procedures. The full text of the policy is available on the AACC website ([www.aacc.edu/policies/](http://www.aacc.edu/policies/)) and in the Student Handbook and College catalog.

**Academic Integrity:** Anne Arundel Community College, with a central mission of producing learning and a belief that individuals be given the opportunity to fully develop their potential, is committed to upholding rigorous and fair standards of student learning and achievement. Achieving successful student learning is dependent upon a dedication to academic integrity on the part of all members of the college community. Without academic integrity, students gain unfair advantage over others and impede their own development.

In support of this aim, Anne Arundel Community College requires all students to exhibit academic integrity in all their academic work. A culture of academic integrity, a unifying principle in this and all academic communities, is built upon respect for others' work, commitment to doing one's own work, and intolerance for academic dishonesty in all its forms. For more information, visit:

<http://catalog.aacc.edu/content.php?catoid=20&navoid=5124>

Acts of academic dishonesty such as cheating or plagiarism are violations of the college's Academic Integrity Policy and are subject to formal disciplinary action.

Acts of academic dishonesty include, but are not limited to:

- A. Cheating, which is the use or attempted use of unauthorized material, information, electronic device, implement or study aid in an academic exercise or assignment without the instructor's permission;
- B. Plagiarizing, which is the unacknowledged or improperly cited adoption or reproduction of the ideas, words, data or statements of others, including fellow students and internet sources;
- C. Fabricating or falsifying, which is the unauthorized falsification or invention of any data, information or citation in an academic exercise;
- D. Impersonating, which is assuming another student's identity or allowing another student to do so for the purpose of fulfilling an academic requirement;
- E. Facilitating, which is helping or attempting to help another commit an act of academic dishonesty.

**Any student caught cheating, plagiarizing, fabricating, impersonating, or facilitating on any graded assignment will receive a failing grade of F on the assignment and the module. The student may receive a failing grade of F for the course grade. The incident will go on the student's record.**

**Emergency Procedures:** The E2 Campus Message System instantly provides an emergency text message to your cell phone, wireless PDA, pager, or email address. If you are not signed up for this system, go to [www.aacc.edu/campusalerts](http://www.aacc.edu/campusalerts) to enroll today. Public Safety can be reached at 410-777-1818.

**Inclement Weather Policy:** The main campus provides a telephone recording detailing any closings of the campus during inclement weather: 410-777-2222. If you are enrolled in the E2 Campus Message System, you will also receive a text message regarding any delays or closings due to inclement weather.

**NOTE:** If the college is officially closed for any reason, you should still continue to work on MyLabsPlus assignments according to the due dates listed on the Course Schedule. **Due dates will only be moved if the incident is affecting a testing window for taking tests on campus or for extended power outages.**

**Acceptable Use of Information Technology Resources Policy** This policy governs the acceptable use of the college information resources by anyone. This policy applies to students enrolled in this course at any time they are using college resources. The goal of the usage policy is to encourage an environment of learning in which all students can interact in an open, legal, and ethical manner. The full text of the policy is available on the AACC website (<http://www.aacc.edu/policies/acceptable-use-of-technology-resources-policy/>). The procedures that implement the policy are available on the AACC website (<http://www.aacc.edu/policies/acceptable-use-of-information-technology-resources-procedures/>).

For a complete list of all college policies, visit [www.aacc.edu/policies](http://www.aacc.edu/policies)

For a complete list of academic regulations, visit <http://catalog.aacc.edu/content.php?catoid=20&navoid=5124>