

MATH 5362 : Introduction to Analytic Number Theory
Section 01, MWF 10:00–10:50 MATH 115.

Course Information:

Instructor: Chris Monico
Email: c.monico@ttu.edu
Office: MA-252
Office Hours: MW 11:00-12:00 and 1:00-2:30.
Required Text: “Introduction to Analytic Number Theory” by Tom Apostol.

Course outline/Important Dates: We will cover Chapters 2-4,6,7,11-13, omitting the occasional section and supplementing with other material, as necessary.

Last day for student-initiated drop on MyTech with penalty	Monday, 10/31/11.
Last day of classes	Wednesday, 12/7/11.

Grading Policy: Your final grade in this course will consist of the following weighted components:

Homework:	50%
Research paper:	25%
Attendance:	25%

Homework must be **legible and stapled**. You are encouraged to work in groups on homework assignments, unless otherwise indicated; but at no time is simple copying of homework assignments acceptable since you will not learn anything of value that way.

Your final letter grade for this course will be determined as follows.

90–100%	A
80–89%	B
65–79%	C
55–64%	D
0–54%	F

Attendance: Class attendance is *mandatory*. An absence will be excused *if and only if* you are absent for one of the following reasons:

- You are out of town performing duties on behalf of the university (i.e., athletics). Advance notification is required.
- Religious holy day (see below).
- Hospitalization (requires verification from the Center for Campus Life).

Expected Learning Outcomes Students will learn to use some basic tools of number theory, including, but not limited to

- the frequently occurring functions $\varphi(n)$, $\mu(n)$, $\Lambda(n)$, $\psi(x)$, $\sigma_\alpha(n)$, $L(s, -)$, $\zeta(s)$, $\pi(x)$,

- Euler summation, partial summation, ‘big-oh’ notation, average order of an arithmetic function,
- standard results about Dirichlet characters and L -series.

By the end of the course, the student should have a reasonable understanding of the proof of Dirichlet’s Theorem and the analytic proof of the Prime Number Theorem.

ADA Accommodation: Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructors office hours. Please note instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, you may contact the Student Disability Services office in 335 West Hall or 806-742-2405.

Religious Holy Day Observance (OP 34.19)

1. “Religious holy day” means a holy day observed by a religion whose places of worship are exempt from property taxation under Texas Tax Code §11.20.
2. A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.
3. A student who is excused under Section 2 may not be penalized for the absence; however, the instructor may respond appropriately if the student fails to complete the assignment satisfactorily.

Academic Integrity I take academic integrity extremely seriously. In particular, I have a zero-tolerance policy for both cheating and plagiarism. I define *plagiarism* as claiming the work or ideas of someone else as your own. Copying homework, phrases, sentences, or mathematics from any other source (including another student or a solutions manual) without citation is therefore plagiarism. Yes - it is very possible to plagiarize mathematics and it is just as offensive as every other instance of plagiarism. I would hope that you do not want someone else to claim credit for your hard work and I therefore expect that you will not claim credit for someone else’s work under any circumstances. If you use (read, look at, listen to, copy,...) a source other than the textbook then cite it, being as specific as possible (e.g., if you used a web site then give the URL - but if you forgot to write it down or cannot find it, the next best thing would be the name of the web site; if you cannot remember that, then at least acknowledge that it came from the web but you cannot remember where).

All instances of cheating on exams will be dealt with as strictly as allowed by TTU OP 34.12. Instances of plagiarism will be dealt with on a case-by-case basis and may range from a written warning to an automatic assignment of an F in the course, depending on the severity of the offense.