MATH 7721, SPRING 2018

Further References

[**DG**] stands for *Differential Geometry* at
`https://people.math.osu.edu/derdzinski.1/courses/6701/DG.pdf`
[**RG**] for *Math 7711, Autumn 2017, a day-by-day list of topics* at
`https://people.math.osu.edu/derdzinski.1/courses/7711/topics.pdf`
[**PS**] for *Projective Spaces and Grassmannians* at
`https://people.math.osu.edu/derdzinski.1/courses/7721/ps.pdf`

1. JANUARY 8.

Orientations in a real vector space of a positive finite dimension: [**DG**, Section 70].
Connectedness of the automorphism group of a finite-dimensional complex vector space: [**DG**, Problem 8 in Section 12].
Tangent spaces of Cartesian products: [**DG**, Problem 28 in Section 9].

2. JANUARY 10.

The Levi-Civita connection: [**DG**, Section 30].

3. JANUARY 12.

The Levi-Civita connection of a submanifold metric: [**RG**, entry for October 27].

7. JANUARY 24.

Finite partitions of unity: [**DG**, Section 36].
Oriented integration of compactly supported continuous top degree differential forms: [**DG**, Section 57].
The Stokes theorem: [**DG**, Section 57].
De Rham cohomology: [**DG**, Section 52].

9. JANUARY 29.

The Betti numbers of spheres: [**DG**, Section 56].
The Künneth formula for $S^1 \times N$: [**DG**, Section 56].
The Mayer-Vietoris sequence: [**DG**, Section 55].

9. FEBRUARY 5.

Formula (12.8): [**DG**, Problem 13 in Section 8].

24. FEBRUARY 28.

Local flows of vector fields: [**DG**, Section 85].
Global solutions to linear differential equations: [**DG**, Section 79].
Holomorphicity of the mappings $\mathrm{P}V \to \mathrm{P}V$ induced by complex-linear automorphisms of V: [**PS**].