

Week 1

Monday, January 3, 2011	<i>Lecture 1</i> What is a manifold?
Wednesday, January 5, 2011	<i>Lecture 2</i> What is a smooth function?
Friday, January 7, 2011	<i>Lecture 3</i> Tangent vectors

Week 2

Monday, January 10, 2011	<i>Lecture 4</i> The tangent bundle
Wednesday, January 12, 2011	<i>Lecture 5</i> Vector bundles
Friday, January 14, 2011	<i>Lecture 6</i> The cotangent bundle

Week 3

Wednesday, January 19, 2011	<i>Lecture 7</i> Submersions and immersions
Friday, January 21, 2011	<i>Lecture 8</i> Inverse function theorem

Week 4

Monday, January 24, 2011	<i>Lecture 9</i> Embedded submanifolds
Wednesday, January 26, 2011	<i>Lecture 10</i> Immersed submanifolds
Friday, January 28, 2011	<i>Lecture 11</i> Whitney embedding theorem

Week 5

Monday, January 31, 2011	<i>Lecture 12</i> Tensors
Wednesday, February 2, 2011	<i>Lecture 13</i> Exterior derivative
Friday, February 4, 2011	<i>Lecture 14</i> Orientations

Week 6

Monday, February 7, 2011	<i>Lecture 15</i> Orientations
Wednesday, February 9, 2011	<i>Lecture 16</i> Integration
Friday, February 11, 2011	<i>Lecture 17</i> Stokes' theorem

Week 7

Monday, February 14, 2011	<i>Lecture 18</i> Integral curves
Wednesday, February 16, 2011	<i>Lecture 19</i> Lie derivatives
Friday, February 18, 2011	<i>Lecture 20</i> Applications

Week 8

Monday, February 21, 2011	<i>Lecture 21</i> Foliations
Wednesday, February 23, 2011	<i>Lecture 22</i> Frobenius theorem
Friday, February 25, 2011	<i>Lecture 23</i> Poincaré-Hopf index theorem

Week 9

Monday, February 28, 2011	<i>Lecture 24</i> Partial differential relations
Wednesday, March 2, 2011	<i>Lecture 25</i> Smale-Hirsch theorem
Friday, March 4, 2011	<i>Lecture 26</i> h -principle

Week 10

Monday, March 7, 2011	<i>Lecture 27</i> The Maurer-Cartan form
Wednesday, March 9, 2011	<i>Lecture 28</i> Curvature via frames