

TOP OF UTAH MARATHON PACING MATRIX AND ELEVATION PROFILE

In *Advanced Marathoning*, Pfitzinger and Douglas state that the optimal pacing strategy is to run at a relatively even effort, depending on the particular characteristics of the course. Surging will waste valuable glycogen (energy stores), and running slower than pace will force you to make up for the lapse later. The Top of Utah Marathon course's main characteristic that controls pace is the downhill gradient of the first 2/3 of the course followed by the small rolling hills in the last 1/3. In *The Lore of Running*, Noakes describes studies that showed the energy savings of running downhill to be about half of the energy cost of running uphill at the equivalent gradient. The matrix below applies these principles and uses the TOU elevation profile to predict appropriate mile splits for an array of goal finish times. These splits take into account elevation gain and loss for each mile, and will help TOU runners maintain an even *effort* over the varied terrain of the TOU course, and give guidelines to avoiding tactical pacing errors and to conserving glycogen.

Mile	Goal Time																										
	2:20	2:25	2:30	2:35	2:40	2:45	2:50	2:55	3:00	3:05	3:10	3:15	3:20	3:25	3:30	3:35	3:40	3:45	3:50	3:55	4:00	4:05	4:10	4:15	4:20	4:25	4:30
1	05:11	05:22	05:33	05:44	05:55	06:06	06:17	06:28	06:39	06:51	07:02	07:13	07:24	07:35	07:46	07:57	08:08	08:19	08:30	08:41	08:53	09:04	09:15	09:26	09:37	09:48	09:59
2	05:13	05:24	05:35	05:47	05:58	06:09	06:20	06:31	06:43	06:54	07:05	07:16	07:27	07:38	07:50	08:01	08:12	08:23	08:34	08:46	08:57	09:08	09:19	09:30	09:42	09:53	10:04
3	05:18	05:29	05:41	05:52	06:03	06:15	06:26	06:37	06:49	07:00	07:11	07:23	07:34	07:45	07:57	08:08	08:20	08:31	08:42	08:54	09:05	09:16	09:28	09:39	09:50	10:02	10:13
4	05:15	05:27	05:38	05:49	06:01	06:12	06:23	06:34	06:46	06:57	07:08	07:19	07:31	07:42	07:53	08:04	08:16	08:27	08:38	08:50	09:01	09:12	09:23	09:35	09:46	09:57	10:08
5	05:17	05:28	05:40	05:51	06:02	06:13	06:25	06:36	06:47	06:59	07:10	07:21	07:33	07:44	07:55	08:07	08:18	08:29	08:41	08:52	09:03	09:15	09:26	09:37	09:49	10:00	10:11
6	05:19	05:30	05:41	05:53	06:04	06:15	06:27	06:38	06:50	07:01	07:12	07:24	07:35	07:46	07:58	08:09	08:21	08:32	08:43	08:55	09:06	09:17	09:29	09:40	09:52	10:03	10:14
7	05:29	05:41	05:52	06:04	06:16	06:27	06:39	06:51	07:03	07:14	07:26	07:38	07:50	08:01	08:13	08:25	08:37	08:48	09:00	09:12	09:24	09:35	09:47	09:59	10:11	10:22	10:34
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9	05:17	05:28	05:40	05:51	06:02	06:14	06:25	06:36	06:48	06:59	07:10	07:22	07:33	07:44	07:56	08:07	08:18	08:30	08:41	08:52	09:04	09:15	09:26	09:38	09:49	10:00	10:11
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2nd Half	1:10:50	1:13:22	1:15:54	1:18:25	1:20:57	1:23:29	1:26:01	1:28:33	1:31:04	1:33:36	1:36:08	1:38:40	1:41:11	1:43:43	1:46:15	1:48:47	1:51:19	1:53:50	1:56:22	1:58:54	2:01:26	2:03:58	2:06:29	2:09:01	2:11:33	2:14:05	2:16:36

