

# Lux Center News



February 29, 2016

## **Take A Leap! New Year—Old Calendars**

If you are one of many who constantly complain about a lack of time, take heart! You will be happy to learn that this year you will be getting an extra 24 hours. Today is February 29<sup>th</sup>, the elusive leap day. A look at our calendars may explain the need to add this extra day every four years and a few other interesting tidbits of information. Since you have so much extra time, enjoy Gregorian and Hebrew calendars 101.

### **The Gregorian Calendar—The Year 2016**

The calendar that most people around the world use today is called the Gregorian Calendar, named for Pope Gregory XIII who introduced it in 1582. Prior to the Gregorian Calendar, the calendar used in Europe was the Julian calendar that was introduced by Julius Caesar in 45 B.C.E. (Before the Common Era). This calendar was used in the territories controlled by the Romans. When the Roman Empire was Christianized, the Julian calendar was adopted as the Christian liturgical calendar.

It was eventually discovered that the Julian calendar miscalculated the solar year by 11 minutes each year. This caused (over time) the calendar to be out of sync with the seasons. Pope Gregory decided to rectify this problem and so introduced the new calendar under the papal bull known as *Inter gravissimas*.

It turns out that the Gregorian calendar was not perfect either. As it takes the earth 365.2422 days to orbit the sun, and the Gregorian calendar only has 365 days, an extra day is added every four years to help synchronize the calendar year with the solar year.

By the time that the Gregorian calendar was adopted throughout the Roman Catholic world, the schism between the Roman Catholic and Eastern Orthodox churches was going on for 500 years. The Protestant Reformation had taken place over 50 years before. Countries under Protestant rule initially rejected the Gregorian calendar due to its ties with the papacy. Great Britain eventually adopted the Gregorian calendar in 1752 and was not the last to do so. The Ottoman Empire did not join the rest of the world in use of this calendar until 1917. Russia followed in 1918.

The Russian Orthodox Church (and other Eastern Orthodox churches) still uses the Julian calendar, though. That is why Christmas is celebrated in Russia on January 7<sup>th</sup>, the Julian equivalent of the Gregorian 25<sup>th</sup> of December.

### **The Hebrew Calendar—The Year 5776**

While Jews around the world use the Gregorian calendar for their daily lives, Jewish worship follows the Hebrew calendar. The Hebrew calendar is a lunar calendar meaning it is based on the moon cycles rather than the solar cycles. A fixed calendar based on mathematical and astronomical calculations was established in the 4<sup>th</sup> century. This calendar standardized the length of months and the addition of months over the course of a nineteen year cycle.

The years on the Hebrew calendar are counted according to the tradition of the creation of the world. The rabbis used the first Book of Chronicles in the Bible that lists the family tree of the Jewish people beginning with Adam and Eve. By counting the time that each person lived, the rabbis believed they were able to count back to the time when the world was created.

There are generally 12 months in the Jewish year. Each month is 29 ½ days as that is the time it takes for the moon to revolve around the earth.

A few issues were noticed while using this calendar. The first issue is that a day cannot be divided in half and so some months were given 29 days and others 30. Unlike the Hebrew calendar, the Gregorian calendar abandoned any correlation between moon cycles and the month, and simply estimated the length of the months to 28, 30 or 31 days.

The next issue was that the ancient Jews recognized that farming crops was dependent on the seasons according to the sun. The sun year is eleven days longer than the moon year. Instead of adding, as is done today on the Gregorian calendar, one day every four years for a leap year, they added a whole month seven times during a period of 19 years. Therefore, some years in the Jewish calendar have 13 months. (This year happens to be one of them). The Hebrew calendar has a whole leap month.

### **Some notable spring dates for your personal calendar:**

<b>March 13-14</b>	<b>Lux Center Spring Lectures with Jodi Magness, Ph.D. at SHSST</b>
<b>March 20</b>	<b>Palm Sunday</b>
<b>March 23</b>	<b>Purim (Festival of Esther) Begins at sunset and ends at sunset on March 24</b>
<b>March 25</b>	<b>Good Friday</b>
<b>March 27</b>	<b>Easter Sunday</b>
<b>April 22-30</b>	<b>Passover</b> 8 day Jewish holiday that celebrates the exodus of the Jews from Egypt and slavery
<b>April 26</b>	<b>Lux Center Passover seder dinner at SHSST, 5:30 p.m. in the dining hall</b>
<b>May 6</b>	<b>Last day of classes at SHSST</b>
<b>May 15</b>	<b>Pentecost Sunday</b>
<b>June 11-13</b>	<b>Shavuot</b> commemorates the receiving of the Torah by the Israelites on Mt. Sinai
<b>June 20</b>	<b>Bethsaida trip departs</b>

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