

# ISO Geodetic Registry

<i>Item class</i>	GeodeticCRS	
<i>Name</i>	<b>NAD83(CSRs) v3 - XYZ</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	386	
<i>Alias</i>	NAD83v3	
<i>Alias</i>	Canadian Spatial Reference System 1998	
<i>Alias</i>	NAD83	
<i>Alias</i>	NAD83(CSRs)	
<i>Alias</i>	NAD83(CSRs98)	
<i>Alias</i>	CSRS98	
<i>Alias</i>	NAD83(CSRs)v3	
<i>Alias</i>	Canadian Spatial Reference System	
<i>Alias</i>	CSRS	
<i>Alias</i>	North American Datum 1983 v3	
<i>Information source</i>	<i>Title</i>	The Canadian Spatial Reference System (CSRS)
	<i>Author</i>	Canadian Geodetic Survey
	<i>Publisher</i>	Canadian Geodetic Survey, Surveyor General Branch, Earth Sciences Sector, Natural Resources Canada, Government of Canada
	<i>Publication date</i>	2016-08-30
<i>Information source</i>	<i>Title</i>	The Evolution of NAD83 in Canada
	<i>Author</i>	M. Craymer
	<i>Publisher</i>	Canadian Institute of Geomatics
	<i>Publication date</i>	2006
	<i>Series/Journal name</i>	Geomatica
	<i>Issue identification</i>	Volume 60, No. 2
<i>Data source</i>	<i>Page</i>	151-164
	ISO Geodetic Registry	
<i>Scope</i>	Spatial referencing	
<i>Datum</i>	North American Datum of 1983 (CSRS) version 3	
<i>Coordinate System</i>	Geocentric 3D right-handed Cartesian CS. Axes: Geocentric X,Y,Z. Orientation: Z to North Pole, [X and Y in the equatorial plane, X at Prime Meridian   X in the equatorial plane at the Prime Meridian]. UoM: m.	

## Extent

<i>Description</i>	<b>Canada - onshore and offshore - Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Northwest Territories, Nova Scotia, Nunavut, Ontario, Prince Edward Island, Quebec, Saskatchewan, Yukon.</b>	
<i>Geographic Bounding Box</i>	<i>West-bound longitude</i>	-141.01
	<i>North-bound latitude</i>	90.0
	<i>East-bound longitude</i>	-47.74
	<i>South-bound latitude</i>	40.04

# ISO Geodetic Registry

Item class	GeodeticDatum	
Name	North American Datum of 1983 (CSRS) version 3	
Item status	VALID	
Identifier	123	
Alias	NAD83v3	
Alias	Canadian Spatial Reference System 1998	
Alias	NAD83	
Alias	NAD83(CSRS)	
Alias	NAD83CSRS	
Alias	NAD83(CSRS98)	
Alias	CSRS98	
Alias	NAD83(CSRS)v3	
Alias	Canadian Spatial Reference System	
Alias	CSRS	
Alias	North American Datum 1983 v3	
Information source	Title	The Evolution of NAD83 in Canada
	Author	M. Craymer
	Publisher	Canadian Institute of Geomatics
	Publication date	2006
	Series/Journal name	Geomatica
	Issue identification	Volume 60, No. 2
	Page	151-164
Information source	Title	The Evolution of NAD83 in Canada: Addendum
	Author	M. Craymer
	Publisher	Canadian Institute of Geomatics
	Publication date	2006
	Series/Journal name	Geomatica
	Issue identification	Volume 60, No. 4
	Page	433.0
Information source	Title	The Canadian Spatial Reference System (CSRS)
	Author	Canadian Geodetic Survey
	Publisher	Canadian Geodetic Survey, Surveyor General Branch, Earth Sciences Sector, Natural Resources Canada, Government of Canada
	Publication date	2016-08-30
Data source	ISO Geodetic Registry	
Remarks	Adopted by the Canadian federal government for use in Canada, and by provincial governments in British Columbia, Nova Scotia and Ontario. Replaces NAD83(CSRS) v2. Replaced by NAD83(CSRS) v4.	
Anchor definition	Realization of the North American Datum of 1983 for the Canadian Spatial Reference System, referred to as CSRS98 or CSRS. The frame is defined by a time-dependent seven parameter transformation of ITRF97 3D geocentric Cartesian coordinates and velocities for Canadian and bordering US and Greenland stations at reference epoch 1997.0. The frame is kept aligned to North America at other epochs using the NNR-NUVEL-1A estimate of three Cartesian rotation rates of change representing the tectonic plate motion of North America. The origin, scale and orientation of the frame are nominally defined to be that for the BIH Terrestrial System 1984 (BTS84).	
Release date	1999-01-01	
Scope	Spatial referencing	
Ellipsoid	GRS 1980	

Prime Meridian	Greenwich
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Extent

Description	<b>Canada - onshore and offshore - Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Northwest Territories, Nova Scotia, Nunavut, Ontario, Prince Edward Island, Quebec, Saskatchewan, Yukon.</b>		
Geographic Bounding Box	West-bound longitude	-141.01	
	North-bound latitude	90.0	
	East-bound longitude	-47.74	
	South-bound latitude	40.04	

# ISO Geodetic Registry

<i>Item class</i>	Ellipsoid														
<i>Name</i>	<b>GRS 1980</b>														
<i>Item status</i>	VALID														
<i>Identifier</i>	27														
<i>Alias</i>	Geodetic Reference System 1980														
<i>Alias</i>	GRS1980														
<i>Alias</i>	IAG GRS80														
<i>Alias</i>	International 1979														
<i>Alias</i>	GRS80														
<i>Information source</i>	<table> <tr> <td><i>Title</i></td><td>Geodetic Reference System 1980</td></tr> <tr> <td><i>Author</i></td><td>H. Moritz</td></tr> <tr> <td><i>Publisher</i></td><td>Springer International Publishing</td></tr> <tr> <td><i>Publication date</i></td><td>2003-03</td></tr> <tr> <td><i>Series/Journal name</i></td><td>Journal of Geodesy</td></tr> <tr> <td><i>Issue identification</i></td><td>Volume 74, No. 1</td></tr> <tr> <td><i>Page</i></td><td>128–162</td></tr> </table>	<i>Title</i>	Geodetic Reference System 1980	<i>Author</i>	H. Moritz	<i>Publisher</i>	Springer International Publishing	<i>Publication date</i>	2003-03	<i>Series/Journal name</i>	Journal of Geodesy	<i>Issue identification</i>	Volume 74, No. 1	<i>Page</i>	128–162
<i>Title</i>	Geodetic Reference System 1980														
<i>Author</i>	H. Moritz														
<i>Publisher</i>	Springer International Publishing														
<i>Publication date</i>	2003-03														
<i>Series/Journal name</i>	Journal of Geodesy														
<i>Issue identification</i>	Volume 74, No. 1														
<i>Page</i>	128–162														
<i>Information source</i>	<table> <tr> <td><i>Title</i></td><td>Geodetic Reference System 1980</td></tr> <tr> <td><i>Author</i></td><td>H. Moritz</td></tr> <tr> <td><i>Publisher</i></td><td>International Association of Geodesy</td></tr> <tr> <td><i>Publication date</i></td><td>1984</td></tr> <tr> <td><i>Series/Journal name</i></td><td>Bulletin Geodesique</td></tr> <tr> <td><i>Issue identification</i></td><td>Volume 58, No. 3</td></tr> <tr> <td><i>Page</i></td><td>395-405</td></tr> </table>	<i>Title</i>	Geodetic Reference System 1980	<i>Author</i>	H. Moritz	<i>Publisher</i>	International Association of Geodesy	<i>Publication date</i>	1984	<i>Series/Journal name</i>	Bulletin Geodesique	<i>Issue identification</i>	Volume 58, No. 3	<i>Page</i>	395-405
<i>Title</i>	Geodetic Reference System 1980														
<i>Author</i>	H. Moritz														
<i>Publisher</i>	International Association of Geodesy														
<i>Publication date</i>	1984														
<i>Series/Journal name</i>	Bulletin Geodesique														
<i>Issue identification</i>	Volume 58, No. 3														
<i>Page</i>	395-405														
<i>Data source</i>	ISO Geodetic Registry														
<i>Remarks</i>	Adopted by IUGG 1979 Canberra. Inverse flattening is derived from geocentric gravitational constant $GM = 3986005e8 \text{ m}^3/\text{s}^2$ , dynamic form factor $J_2 = 108263e-8$ and Earth's angular velocity = $7292115e-11 \text{ rad/s}$ .														
<i>Semi-major axis</i>	6378137.0 m														
<i>Inverse flattening</i>	298.257222101 m														

# ISO Geodetic Registry

<i>Item class</i>	PrimeMeridian	
<i>Name</i>	<b>Greenwich</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	25	
<i>Alias</i>	Zero meridian	
<i>Information source</i>	<i>Title</i>	Why the Greenwich meridian moved
	<i>Author</i>	S. Malys, J.H. Seago, N.K. Pavlis, P.K. Seidelmann, G.H. Kaplan
	<i>Publisher</i>	Springer International Publishing
	<i>Publication date</i>	2015-12
	<i>Series/Journal name</i>	Journal of Geodesy
	<i>Issue identification</i>	Volume 89, No. 12
	<i>Page</i>	1263–1272
<i>Information source</i>	<i>Title</i>	IERS Conventions (2010)
	<i>Author</i>	G. Petit, B.J. Luzum (eds)
	<i>Publisher</i>	Verlag des Bundesamts für Kartographie und Geodäsie
	<i>Publication date</i>	2010
	<i>Edition date</i>	
	<i>Series/Journal name</i>	IERS Technical Notes
	<i>Issue identification</i>	36.0
<i>Data source</i>	<i>Other citation details</i>	ISSN: 1019-4568
	ISO Geodetic Registry	
<i>Greenwich longitude</i>	0.0 °	

# ISO Geodetic Registry

Item class	CartesianCS	
Name	<b>Geocentric 3D right-handed Cartesian CS.</b> <b>Axes: Geocentric X,Y,Z. Orientation: Z to North Pole, [X and Y in the equatorial plane, X at Prime Meridian   X in the equatorial plane at the Prime Meridian]. UoM: m.</b>	
Item status	VALID	
Identifier	45	
Alias	Earth centred, earth fixed, right-handed 3D coordinate system, consisting of 3 orthogonal axes with X and Y axes in the equatorial plane, positive Z-axis parallel to mean earth rotation axis and pointing towards North Pole. UoM: m.	
Alias	ECEF	
Information source	Title	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Remarks	Used in geocentric coordinate reference systems.	

## Axes

Item class	CoordinateSystemAxis	
Name	<b>Geocentric X</b>	
Item status	VALID	
Identifier	33	
Information source	Title	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Abbreviation	X	
Direction	Geocentre > equator/0°E	
Unit	metre	

Item class	CoordinateSystemAxis	
Name	<b>Geocentric Y</b>	
Item status	VALID	
Identifier	37	

<i>Information source</i>	<i>Title</i> ISO 19111 Geographical information - Spatial referencing by coordinates <i>Author</i> International Organization for Standardization (ISO) <i>Publisher</i> International Organization for Standardization (ISO) <i>Publication date</i> 2007-07-01 <i>Edition</i> Second Edition <i>Series/Journal name</i> International Standard <i>Issue identification</i> ISO 19111:2007
<i>Data source</i>	ISO Geodetic Registry
<i>Abbreviation</i>	Y
<i>Direction</i>	Geocentre > equator/90°E
<i>Unit</i>	metre

  

<i>Item class</i>	CoordinateSystemAxis
<i>Name</i>	<b>Geocentric Z</b>
<i>Item status</i>	VALID
<i>Identifier</i>	39
<i>Information source</i>	<i>Title</i> ISO 19111 Geographical information - Spatial referencing by coordinates <i>Author</i> International Organization for Standardization (ISO) <i>Publisher</i> International Organization for Standardization (ISO) <i>Publication date</i> 2007-07-01 <i>Edition</i> Second Edition <i>Series/Journal name</i> International Standard <i>Issue identification</i> ISO 19111:2007
<i>Data source</i>	ISO Geodetic Registry
<i>Abbreviation</i>	Z
<i>Direction</i>	Geocentre > north pole
<i>Unit</i>	metre