Problem of the Week Problem C

Circle-Go-Round

A circle with centre O is drawn around $\triangle OBD$ so that B and D lie on the circumference of the circle. BO is extended to A on the circle. Chord AC intersects OD and BD at F and E, respectively.

If $\angle BAC = 19^{\circ}$ and $\angle OFA = 99^{\circ}$, determine the measure of $\angle BEC$. ($\angle BEC$ is marked x° on the diagram.)



