$$\begin{CD}
M^n \oplus M^{n-1} @>{\binom{0\ 0}{1\ 0}}>> M^{n+1} \oplus M^n @>{\binom{0\ 0}{1\ 0}}>> M^{n+2} \oplus M^{n+1} \\
@V{(f_n, d_C^{n-1} \circ f_{n-1})}VV @V{(f_{n+1}, d_C^n \circ f_n)}VV @V{(f_{n+2}, d_C^{n+1} \circ f_{n+1})}VV \\
C^n @>{d_C^n}>> C^{n+1} @>{d_C^{n+1}}>> C^{n+2}
\end{CD}$$