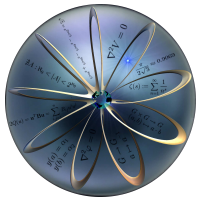

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## Ulrich module

| | |
|---|---|
| Canonical name | UlrichModule |
| Date of creation | 2013-03-22 18:13:38 |
| Last modified on | 2013-03-22 18:13:38 |
| Owner | yshen (21076) |
| Last modified by | yshen (21076) |
| Numerical id | 8 |
| Author | yshen (21076) |
| Entry type | Definition |
| Classification | msc 13C14 |

A maximal Cohen-Macaulay module $M$ over a Noetherian local ring $(R, \mathfrak{m}, k)$ is Ulrich if $e(M) = \mu(M)$, where $e(M)$ is the Hilbert-Samuel multiplicity of $M$ and $\mu(M)$ is the minimal number of generators of $M$. When $M$ is a maximal Cohen-Macaulay module and $\mathfrak{m}$ has a minimal reduction $I$ generated by a system of parameters, $M$ is Ulrich if and only if $\mathfrak{m}M = IM$.