

# Fourier Coefficients of Vector-valued Modular Forms of Dimension 2

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*Abstract.* We prove the following Theorem. Suppose that  $F = (f_1, f_2)$  is a 2-dimensional vector-valued modular form on  $\mathrm{SL}_2(\mathbb{Z})$  whose component functions  $f_1, f_2$  have *rational* Fourier coefficients with *bounded denominators*. Then  $f_1$  and  $f_2$  are classical modular forms on a congruence subgroup of the modular group.